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# Technical Report

## High-Resolution Heliborne Magnetic and TDEM Survey

### Field of Dreams Project, Kirkland Lake Area, Larder Lake Mining Division, Ontario, 2024

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*Prospectair Geosurveys*

*Dynamic Discovery Geoscience*

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**October 2024**

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# I. INTRODUCTION

Prospectair conducted a high-resolution heliborne magnetic (MAG) and time-domain electromagnetic (TDEM) survey for the mineral exploration company Transpacific Resources Inc. on its Field of Dreams Property, located in the Kirkland Lake area, Larder Lake Mining Division, Province of Ontario (Figure 1). The survey was flown from August 31 to September 3, 2024.

Figure 1: **General survey location**

One survey block was flown for a total of 269 l-km (Table 1). A total of 3 production flights were performed using Prospectair's Airbus H125, registration C-GBIP. The helicopter and survey crew operated out of the Rouyn-Noranda Airport, located about 60 km to the southeast of the block (Figure 2).

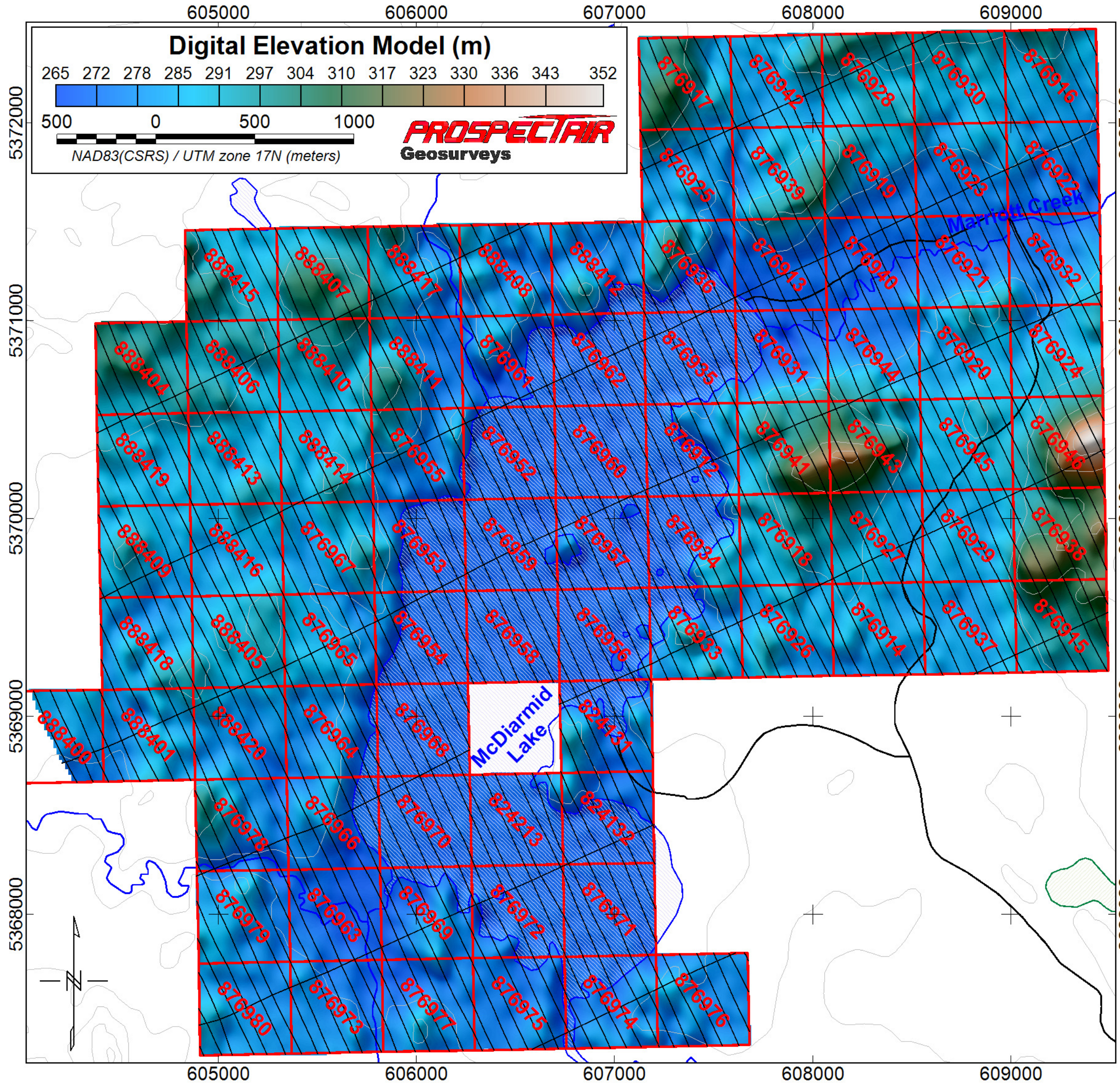
Table 1: **Survey block particulars**

| Block | NTS Mapsheet | Line-km flown | Flight numbers | Dates Flown |
|---|---|---|---|---|
| Field of Dreams | 032D05 | 269 l-km | Flt 1 to 3 | August 31 to September 3 |

Figure 2: **Survey location and base of operation**

The Field of Dreams block was flown with traverse lines at 75 m spacing and control lines spaced every 750 m. The survey lines were oriented N155 and the control lines were oriented perpendicular to traverse lines. The average height above ground of the helicopter was 88 m, with the mag sensor and receiver coil at 63 m, and the transmitter loop at 38 m above the ground. The average survey flying speed (calculated equivalent ground speed) was 29.9 m/s. The survey area is covered by forest, some wetlands and the McDiarmid Lake. The topography is mostly flat, with only a few gentle hills. The elevation is ranging from 265 to 352 m above mean sea level (MSL). The block is found less than 4 km to the south of Road 101 and its eastern edge touches the Ontario-Québec border. With respect to closest communities, the block is located approximately 65 km to the east of Matheson, 50 km to the northeast of Kirkland Lake and 45 km to the northwest of Rouyn-Noranda. From the ground, the block can be accessed using forestry roads departing from Road 101, which links Matheson to the village of Duparquet on the Québec side. Coordinates outlining the survey block are given in Appendix A, with respect to NAD-83 datum, UTM projection zone 17N. The location of the Field of Dreams Property claims overflown (in red) and of the survey lines is shown on Figure 3. The Property claims numbers, as well as the approximate amount of line-km flown over each claim, are also listed in Appendix B.

Figure 3: **Survey lines and Field of Dreams Property claims covered by the survey**

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# II. SURVEY EQUIPMENT

Prospectair provided the following instrumentation for this survey.

**Airborne Magnetometers**

*Geometrics G-822A*

The heliborne system used a non-oriented (strap-down) optically-pumped Cesium split-beam sensor. These magnetometers have a sensitivity of 0.005 nT and a range of 15,000 to 100,000 nT with a sensor noise of less than 0.02 nT. The heliborne sensor was mounted in a bird made of non-magnetic material located 25 m below the helicopter when flying. Total magnetic field measurements were recorded at 10 Hz in the aircraft.

**Time-Domain Electromagnetic Transmitter and Receiver**

*ProspecTEM*

Prospectair Geosurveys significantly modified and improved the *Emosquito II* that was built by THEM Geophysics of Gatineau (Québec) to develop ProspecTEM. It is a powerful light-weight system adapted for small size helicopters and easy manoeuvrability enabling the system to be flown as close to the ground as safely possible and ensuring maximum data resolution. Advanced signal processing technique and a full processing package was developed in house to optimize the ProspecTEM data. The technical specifications are listed below in Table 2.

ProspecTEM system employs a transient or time-domain electromagnetic transmitter that drives an alternating current through an insulated electrical coil system. The towing bridle is constructed from a Kevlar rope and multi-paired shielded cables. It is attached to the helicopter by a weak link assembly. An onboard harness with outboard connectors mounted on a plate allows for quick disconnection or connection of the exterior elements. The system uses a 4 KW generator and a large condenser to transmit alternating 2.75-ms half sine pulses with intervening off-times of 13.916 ms electric pulse, 60 pulses per second.

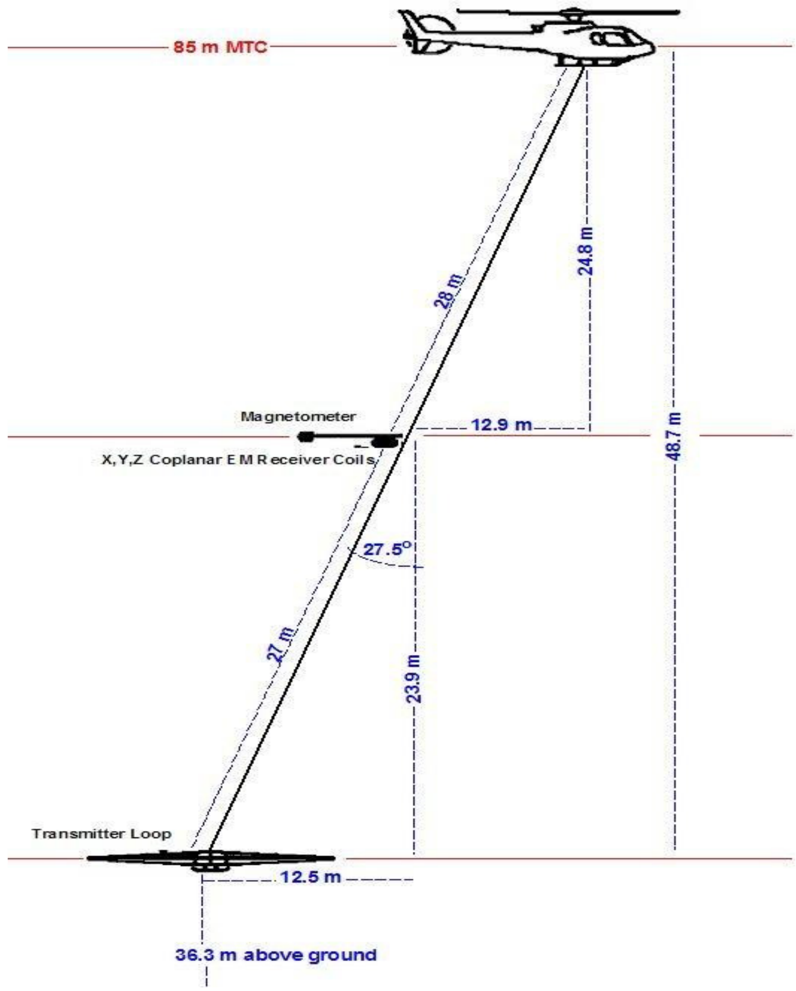
The current in the coil produces an electromagnetic field. Termination of the current flow is not instantaneous, but occurs over a very brief period of time (a few microseconds) known as the ramp time, during which the magnetic field is time-variant. The time-variant nature of the primary electromagnetic field, which propagates downward and outward into the subsurface, induces eddy currents which characteristics are governed by rocks conductivity distribution. These eddy currents generate a secondary electromagnetic field, in accordance with Faraday's Law. This secondary field immediately begins to decay in the process. Measurements of the secondary field are made only during the time-off period by a vertical component receiver located almost half way between the helicopter and the transmitter loop. It is placed with the magnetometer taped to a horizontal boom which supports the receiving coils tear-drop shape vessel at its end. The boom has an elastic suspension. A proprietary suspension system protects the orthogonal coils assembly and limits the total field excursions. The tear-drop vessel acts as a vane and maintains the mast in the line of flight.

Depth of investigation depends on the time interval after shutoff of the current, since at later times the receiver is sensing eddy currents at progressively greater depths. The intensity of the eddy currents at specific times and depths is determined by the bulk conductivity of subsurface rock units and their contained fluids.

Table 2: **Technical specifications of the ProspecTEM Time-Domain system**

| Item | Specification |
|---|---|
| **Transmitter:** | |
| Loop Diameter: | 5.6 meters |
| Current Waveform: | Half-Sine |
| Turns: | 2 |
| Pulse Length | 2.75 ms |
| Frequency | 30 Hz |
| Loop Area | 25 $m^2$ |
| Peak Current | 3000A |
| Tow Cable Length | 65 meters |
| Self-Powered | 13HP Honda coupled with 28 Volts Alternator |
| **Receiver:** | |
| Coils axis | Z |
| Coil effective area | 101 $m^2$ |
| Configuration | Coaxial (Z) |
| Two channels | Current and Z |
| Max Sampling rate | 1000 points per half cycle at 90 Hz |
| Survey sampling rate | 1000 per half cycle at 30Hz |
| Sampling | Full waveform |
| Gates | Programmable |
| On time signal | Recorded |
| **Mechanical:** | |
| Maximum survey speed: | 120 km per hour |
| Transmitter height | 30 meters AGL |
| Receiver height | 60 meters |
| Weight (Total) | 200 kg |

Figure 4: **ProspecTEM system configuration**




**Real-Time Differential GPS**

*Omnistar DGPS*

Prospectair uses an OmniStar differential GPS navigation system to provide real-time guidance for the pilot and to position data to an absolute accuracy of better than 5 m. The *Omnistar* receiver provides real-time differential GPS for the IMPAC on-board navigation system. The differential correction data set was relayed to the helicopter via the appropriate Omnistar network satellite for the survey location. The receiver optimizes the corrections for the current location.

**Airborne Navigation and Data Acquisition System**

*Nuvia IMPAC system*

The airborne geophysical information system (IMPAC) is advanced, software driven instrument specifically designed for mobile aerial or ground geophysical survey work. The IMPAC instrumentation package includes a GPS based navigation system, real-time flight path information that is displayed over a map image of the area, and reliable data acquisition software. Thanks to simple interfacing, the radar and barometric altimeters, the TDEM system and the Geometrics magnetometer are easily integrated into the system and digitally recorded. Automatic synchronization to the GPS position and time provides very close correlation between data and geographical position. The IMPAC is equipped with a software suite allowing easy maintenance, upgrades, data QC, and project and survey area layout planning.

**Magnetic Base Station**

*GEM GSM-19*

A GEM GSM-19 Overhauser magnetometer, a computer workstation and a complement of spare parts and test equipment serve as the base station. Prospectair establish the base station in a secure location with low magnetic noise. The GSM-19 magnetometer has resolution of 0.01 nT, and 0.2 nT accuracy over its operating range of 20,000- to 100,000 nT. The ground system was recording magnetic data at 1 Hz.

**Altimeters**

*Free Flight Radar Altimeter*

The Free Flight radar altimeter measures height above ground to a resolution of 0.5 m and an accuracy of 5% over a range up to 2,500 ft. The radar altimeter data is recorded and sampled at 10 Hz.

*Prospectair Digital Barometric Pressure Sensor*

The barometric pressure sensor measures static pressure to an accuracy of ± 4 m and resolution of 2 m over a range up to 30,000 ft above sea level. The barometric altimeter data are sampled at 10 Hz.

**Survey helicopter**

*Airbus H125 (registration C-GBIP)*

The survey was flown using Prospectair’s H125 helicopter that handles efficiently the equipment load and the required survey range. Table 3 presents the H125 technical specifications and capacity, and the aircraft is shown in Figure 5.

Table 3: **Technical specifications of the H125 Airbus helicopter**

| Item | Specification |
|---|---|
| Powerplant | One 710kW (952shp) Safran Helicopter Arriel 2D |
| Rate of climb | 1,959 ft/min |
| Cruise speed | 260 km/h – 140 kts |
| Service ceiling | 7,010 m |
| Range with no reserve | 630 km |
| Empty weight | 1,305 kg |
| Maximum takeoff weight | 2,800 kg |

Figure 5: **C-GBIP Airbus H125**

# III. SURVEY SPECIFICATIONS

**Data Recording**

The following parameters were recorded during the course of the survey:

In the helicopter:

- GPS positional data: time, latitude, longitude, altitude, heading and accuracy (PDOP) recorded at intervals of 0.1 s.
- Total magnetic field: recorded at intervals of 0.1 s.
- Terrain clearance as measured by the radar altimeter at intervals of 0.1 s.
- Z and Current TDEM channels at 90000Hz.

At the base and remote magnetic ground stations:

- Total magnetic field: recorded at intervals of 1 s.
- GPS time recorded every 1 s to synchronize with airborne data.

**Technical Specifications**

The data quality control was performed on a daily basis. The following technical specifications were adhered to:

- *Height* – 85m target terrain clearance for the MAG-TDEM survey except in areas where Transport Canada regulations prevent flying at this height, or as deemed necessary by the pilot to ensure safety. Traverse lines and control lines must be flown at the same altitude at points of intersection; the altitude tolerances are limited to no more than 30 m difference between traverse lines and control lines.
- *Airborne Magnetometer Data* - The noise envelope not to be exceeded 0.5 nT more than 500 m line-length without a reflight.
- *Diurnal Specifications* – A maximum tolerance of 5.0 nT (peak to peak) deviation from a long chord of one minute at the base station.
- *EM data* – No spikes on Z channel and constant current confirmed.
- *Flying Speed* – The average ground speed for the survey aircraft shall be 120 kph. The acceptable high limit is 160 kph over flat topography.
- *Radar Altimeter* – minimal accuracy of 5%, minimum range of 0-2500 m.
- *Barometer* – Absolute air pressure to 0.1 kPa.
- *Flight Path Following* – Maximum deviation of 30% of line spacing allowed over a maximum line distance of 300 m.

# IV. SYSTEM TESTS

**Magnetometer System Calibration**

The survey configuration using a bird towed 25 m below any magnetic piece of the helicopter allows the simplification of the magnetic calibration requirement. Consequently, heading error and aircraft movement noise was considered negligible and no correction was applied to the data.

**Instrumentation Lag**

The data lag is a combination of two factors: 1) the time difference between when a reading is sensed, and when that value is recorded by the acquisition system, and 2) the time taken for the sensor to arrive at the location of the GPS antenna. The second factor is defined by the physical distance between the GPS antenna and any given sensor, and the speed of the aircraft. The total magnetic lag value for the IMPAC acquisition system has been calculated to 1.92 s for this survey. The TDEM lag has been calculated to -1.11 s.

# V. FIELD OPERATIONS

The survey operations were conducted out of the Rouyn-Noranda Airport from August 31 to September 3, 2024. The MAG-TDEM data acquisition required 3 flights. At the end of each production day, the data were sent to Dynamic Discovery Geoscience's office via internet. The data were then checked for Quality Control to ensure they fulfilled contractual specifications. The full dataset was inspected prior to provide authorization for the field crew to demobilize. The GEM-19 magnetic base station was set up in a magnetically quiet area close to the airport, at latitude 48.2092348°N, longitude 78.8347858°W. The survey pilot was Lenka Tremblay and the survey system technician was Laurent Huard.

Figure 6: **Example of a magnetic base station setup**

# VI. DIGITAL DATA COMPILATION

Data compilation including editing and filtering, quality control, and final data processing was performed by Joël Dubé, P.Eng. Processing was performed on high performance desktop computers optimized for quick daily QC and processing tasks. Geosoft software Oasis Montaj version 2024.1 and Matlab R2018a were used.

**Magnetometer Data**

The airborne magnetometer data, recorded at 10 Hz, were plotted and checked for spikes and noise on a flight basis. A 1.92 second lag correction was applied to all data to correct for the time delay between detection and recording of the airborne data.

Ground magnetometer data were recorded at 1 sample per second and interpolated by a spline function to 10 Hz to match airborne data. Data were inspected for cultural interference and edited where necessary. Some low-pass filtering was deemed necessary on the ground station magnetometer data to remove minor high frequency noise. The diurnal variations were removed by subtracting the ground magnetometer data from the airborne data and then adding back the average magnetic field value of the ground magnetometer.

The levelling corrections were applied in several steps. First, a correction for altitude was applied by multiplying the First Vertical Derivative (FVD) of the Total Magnetic Intensity (TMI) by the difference between the actual survey altitude and the average survey altitude. Standard levelling corrections were then performed using intersection statistics from traverse and tie lines. After statistical levelling was considered satisfactory, decorrugation was applied on the data to remove any remaining subtle non-geological features oriented in the direction of the traverse lines.

Once the Total Magnetic Intensity was gridded, its First Vertical Derivative and Second Vertical Derivative (SVD) were calculated to enhance narrow and shallow geological features. Finally, the component of the normal Earth's magnetic field, described by the International Geomagnetic Reference Field (IGRF), has been removed from the TMI to yield the residual TMI.

In order to enhance the subtle magnetic features some more, the Tilt Angle Derivative (TILT) was also computed for this project.

It has been shown that it is possible to use the Tilt Angle Derivative to estimate both the location and depth of magnetic sources (Salem et al., 2007).

When two bodies of different magnetic susceptibility are in contact, the vertical and horizontal gradients along a horizontal line perpendicular to the vertical contact are governed by the following equations:

$\delta M/\delta h=2KFc(z_c/(h^2+z_c^2))$
$\delta M/\delta z=2KFc(h/(h^2+z_c^2))$

where
K = susceptibility contrast
F = magnetic field's strength
c = 1-$\cos^2$(field Inclination)$\sin^2$(field Declination)
h = location along an horizontal axis perpendicular to the contact
$z_c$ = contact depth
$\delta M/\delta h = \mathrm{sqrt}((\delta M/\delta x)^2+(\delta M/\delta y)^2)$

The Tilt Angle (θ) is defined as
$\theta = \tan^{-1}[(\delta M/\delta z)/(\delta M/\delta h]$

By substitution of the gradients we get
$\theta = \tan^{-1}[h/z_c]$

This has two main implications for any given anomaly:

1- The 0° angle line is located directly above the contact between a magnetic source and the surrounding rock. This allows for accurate estimation of source location.
2- The distance between the 0° and the +45° lines as well as the distance between the -45° and the 0° lines are equal to the depth of the source at the contact. This allows for a direct estimation of the depth of the source of the anomaly. The depth estimated with this method is actually the distance between the magnetic sensor and the top of the source. Knowing that the sensor was 63 m above the ground in average enables direct depth estimates.

In practice, the signal originating from multiple sources at different depth within a same area will cause convolution of the Tilt Angle values, and complicate location and depth estimation. Nevertheless, the method remains an excellent tool for rapid assessment of sources characteristics, without the need for complex assumptions to be made or heavy computer requirements, as is the case with 3D Euler deconvolution or 3D data inversions.

**Radar Altimeter Data**

The terrain clearance measured by the radar altimeter in metres was recorded at 10 Hz. The data were filtered to remove high frequency noise using a 1 sec low pass filter. The final data were plotted and inspected for quality.

**Positional Data**

Real time DGPS correction provided by Omnistar was applied to the recorded GPS positional data.

Positional data (Lat, long, UTM X, UTM Y, geoid height) were recorded at 10 Hz sampling rate and all data processing was performed in the WGS-84 datum. The delivered data are provided in X, Y locations in UTM projection zone 17 North, with respect to the NAD-83 (CSRS) datum. Altitude data were initially recorded relative to the GRS-80 ellipsoid, but are delivered as orthometric heights (MSL elevation).

**Terrain Data**

Terrain elevation data (also referred to as digital elevation model, or DEM) are computed from the altitude of the helicopter, given by DGPS recordings, and the radar altimeter data.

**TDEM Data**

The PicoEnvirotec EM Digital Acquisition System records the vertical component (Z) of the receiver coils at a sampling rate of 90000Hz. There are 30 full cycles (60 half cycles) of the full waveform (Tx ON and OFF time) every second.

The first data manipulation involves a stacking procedure where each half cycle is weighted with respect to the previous cycle (±¼), the next cycle (±¼) and its own value (±½). The positive and negative signs of the respective multiplication coefficients are used to make positive all negative half cycles. The next step is the half cycle averaging corresponding to the desired sampling rate. In the present case, from the 60 stacked positive half cycles per second, 6 consecutive half cycles are averaged to produce one sample every 0.1 sec.

The windowing settings for the 40 different channels are presented in Table 4. Channels 1 to 11 correspond to the ON-time measurements and channels 12 to 40 correspond to the OFF-time. Channel 12 isn't used for interpretation and mapping as some 'ramp-off' effects remain that alters the data quality. Each window is filtered with a median filter removing spikes and with a finite impulse response (FIR) selective filter of the 251th order improving the signal to noise ratio. An average lag correction of -1.11 sec was applied to the data after being empirically determined by flying a sharp anomaly in opposite directions.

Table 4: **Setting used in the windowing of the full waveform**

| Channel # | Starting time (msec) | Width (msec) | Pulse | Channel # | Starting time (msec) | Width (msec) | Pulse |
|---|---|---|---|---|---|---|---|
| **1** | 0.16667 | 0.01667 | **ON** | **21** | 3.15000 | 0.53333 | **OFF** |
| **2** | 0.25000 | 0.01667 | **ON** | **22** | 3.26667 | 0.53333 | **OFF** |
| **3** | 0.33333 | 0.01667 | **ON** | **23** | 3.40000 | 0.53333 | **OFF** |
| **4** | 1.30000 | 0.01667 | **ON** | **24** | 3.40000 | 1.10000 | **OFF** |
| **5** | 1.31667 | 0.01667 | **ON** | **25** | 3.45000 | 1.10000 | **OFF** |
| **6** | 1.33333 | 0.01667 | **ON** | **26** | 3.65000 | 1.10000 | **OFF** |
| **7** | 2.58333 | 0.01667 | **ON** | **27** | 3.88333 | 1.10000 | **OFF** |
| **8** | 2.66667 | 0.01667 | **ON** | **28** | 4.13333 | 1.10000 | **OFF** |
| **9** | 2.80000 | 0.08333 | **ON** | **29** | 4.43333 | 1.10000 | **OFF** |
| **10** | 2.81667 | 0.08333 | **ON** | **30** | 4.76667 | 1.10000 | **OFF** |
| **11** | 2.83333 | 0.08333 | **ON** | **31** | 5.16667 | 1.10000 | **OFF** |
| **12** | 2.85000 | 0.16667 | **RAMP** | **32** | 5.20000 | 2.20000 | **OFF** |
| **13** | 2.86667 | 0.18333 | **OFF** | **33** | 5.55000 | 2.20000 | **OFF** |
| **14** | 2.86667 | 0.25000 | **OFF** | **34** | 6.13333 | 2.20000 | **OFF** |
| **15** | 2.86667 | 0.36667 | **OFF** | **35** | 6.78333 | 2.20000 | **OFF** |
| **16** | 2.91667 | 0.36667 | **OFF** | **36** | 7.51667 | 2.20000 | **OFF** |
| **17** | 2.91667 | 0.53333 | **OFF** | **37** | 8.36667 | 2.20000 | **OFF** |
| **18** | 2.95000 | 0.53333 | **OFF** | **38** | 9.33333 | 2.20000 | **OFF** |
| **19** | 3.00000 | 0.53333 | **OFF** | **39** | 10.4500 | 2.20000 | **OFF** |
| **20** | 3.03333 | 0.53333 | **OFF** | **40** | 11.7000 | 2.20000 | **OFF** |

As for the magnetic data, levelling corrections were applied to the TDEM data using intersection statistics from traverse and tie lines, as well as light decorrugation based on gridded information, in order to remove base line offsets. The levelled TDEM data are delivered in the database.

**Gridding**

The magnetic, early off-time TDEM (channel 13), mid off-time TDEM (channel 20), and late off-time TDEM (channel 27) data were interpolated onto a regular grid using a bi-directional gridding algorithm to create a two-dimensional grid equally incremented in x and y directions.

The final grids were created with 15 m grid cell size, appropriate for the survey lines spaced at 75 m. Traverse lines were used in the gridding process.

# VII. RESULTS AND DISCUSSION

**Magnetic data**

The Residual Total Magnetic Intensity (TMI) of the Field of Dreams block, presented in Figure 7 together with TDEM anomalies, is very settled and varies over a limited range of 205 nT, with an average of -137 nT and a standard deviation of 28 nT.

The surveyed area is affected by linear magnetic features characteristic of alternating sequences of mafic volcanic rocks with sedimentary or intermediate to felsic volcanic rocks, with possibly some intrusive stocks, sills or dykes locally. The northwestern half of the block is characterized by more active signal, stronger background values and linear magnetic textures typical of mafic volcanic rocks. The southeastern half of the block rather shows lower background values and decreased signal variability characteristic of areas dominated by sedimentary or felsic to intermediate intrusive/volcanic rocks. This area to the southeast is also disturbed by a couple of stronger, compact, magnetic anomalies which could belong to mafic intrusive plugs. The strongest anomalies are occurring as linear features near the block's northwestern edge and likely pertain to mafic rocks or pyrrhotite bearing sedimentary horizons. Stronger anomalies are best seen on Figure 8 which shows the residual TMI data with a linear color distribution. Note however that these stronger anomalies are actually very weak in absolute terms.

Magnetic lineaments are mostly generally trending NE-SW in the area, varying from ENE-WSW to NNE-SSW, but there are also a few outlier lineaments striking at different angles locally. Some lineaments appear curved, either by shearing or folding structures, or possibly also at the contact zone with possible intrusions. These evidences are attesting that the area underwent strong deformation events in the past. In general terms, magnetic lineaments are related to rock formations that are enriched in magnetic minerals (magnetite and/or pyrrhotite).

Throughout the block, it is possible to detect structural features offsetting observed magnetic lineaments and causing abrupt interruption or changes of the magnetic response. These features are typically caused by faults, fractures and shear zones. If they are thought to be favorable structures in the exploration context of the Field of Dreams project, they should be paid particular attention and should be the object of a comprehensive structural interpretation, which is beyond the scope of this report.

Shorter wavelength anomalies are greatly enhanced on the FVD (Figure 9) and on the TILT (Figure 10) products. Since the FVD attenuates longer wavelength anomalies, and the TILT enhances very weak amplitude anomalies, they are the preferred products for structural interpretation. As well, a joint analysis of these results with the topography data (Figure 11) can help in the interpretation process of geological structures.

Figure 7: **Total magnetic intensity with equal area color distribution and TDEM anomalies**

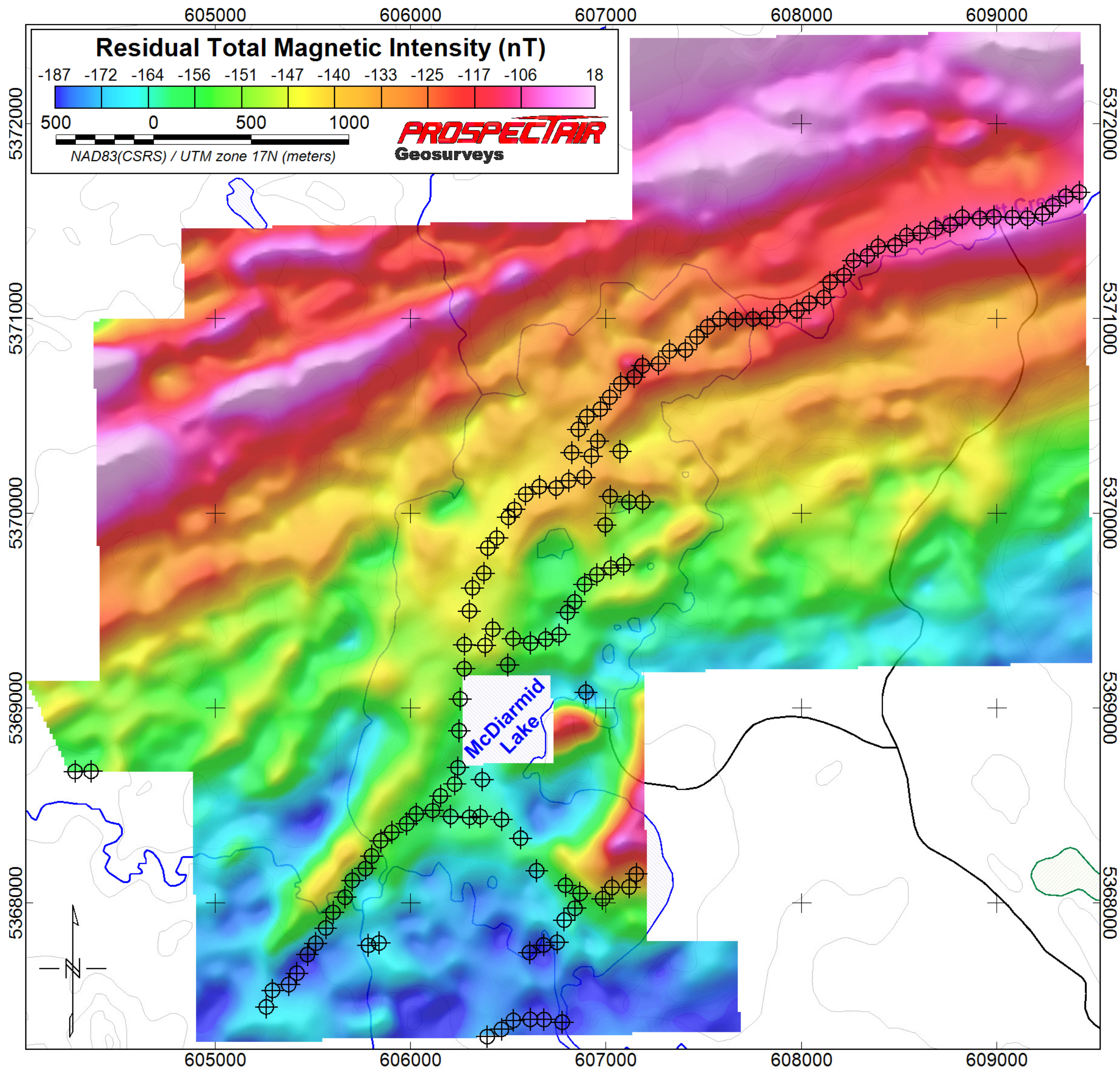



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Figure 8: **Total magnetic intensity with linear color distribution and TDEM anomalies**

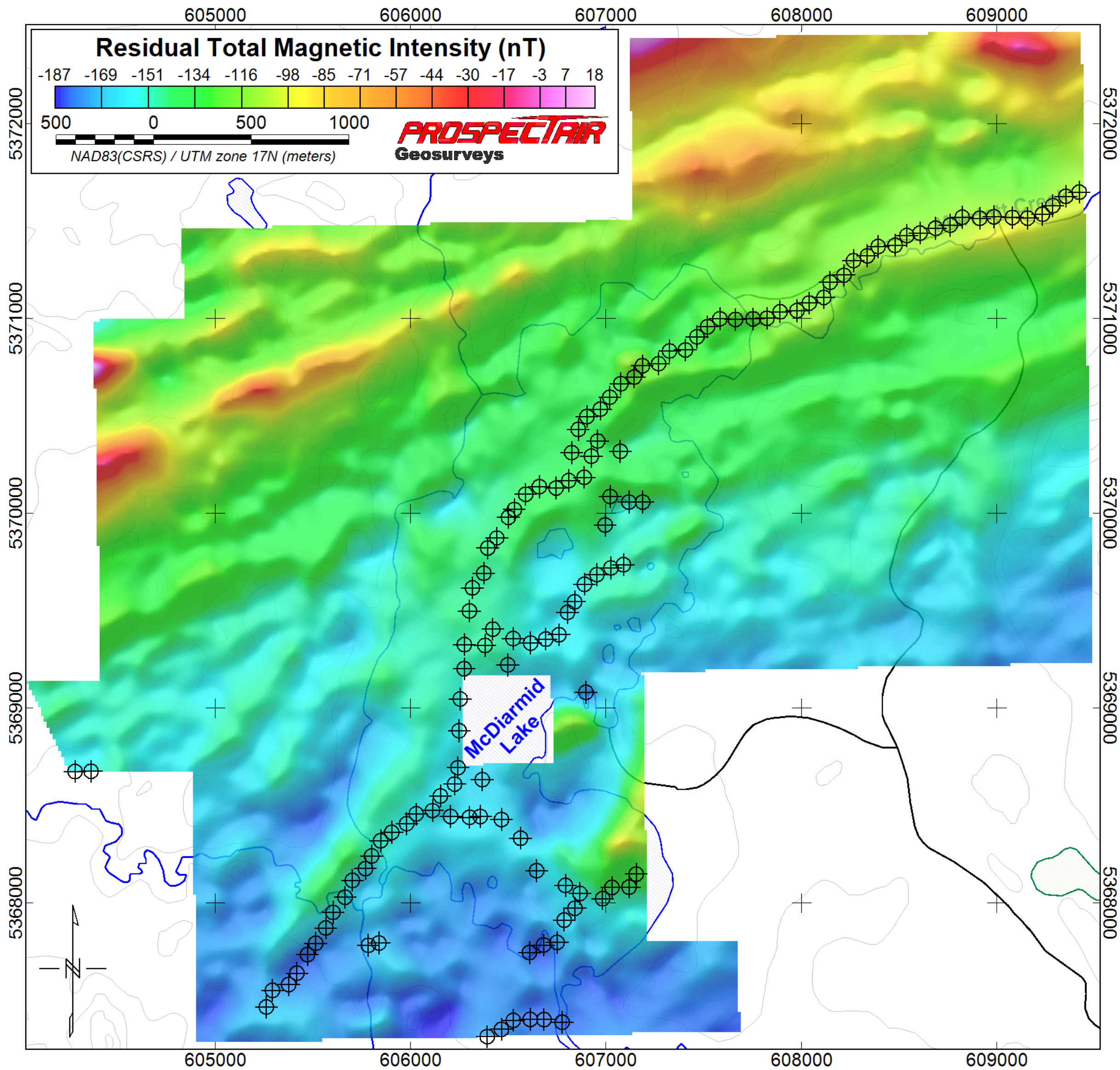


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Figure 9: **First vertical derivative of TMI and TDEM anomalies**

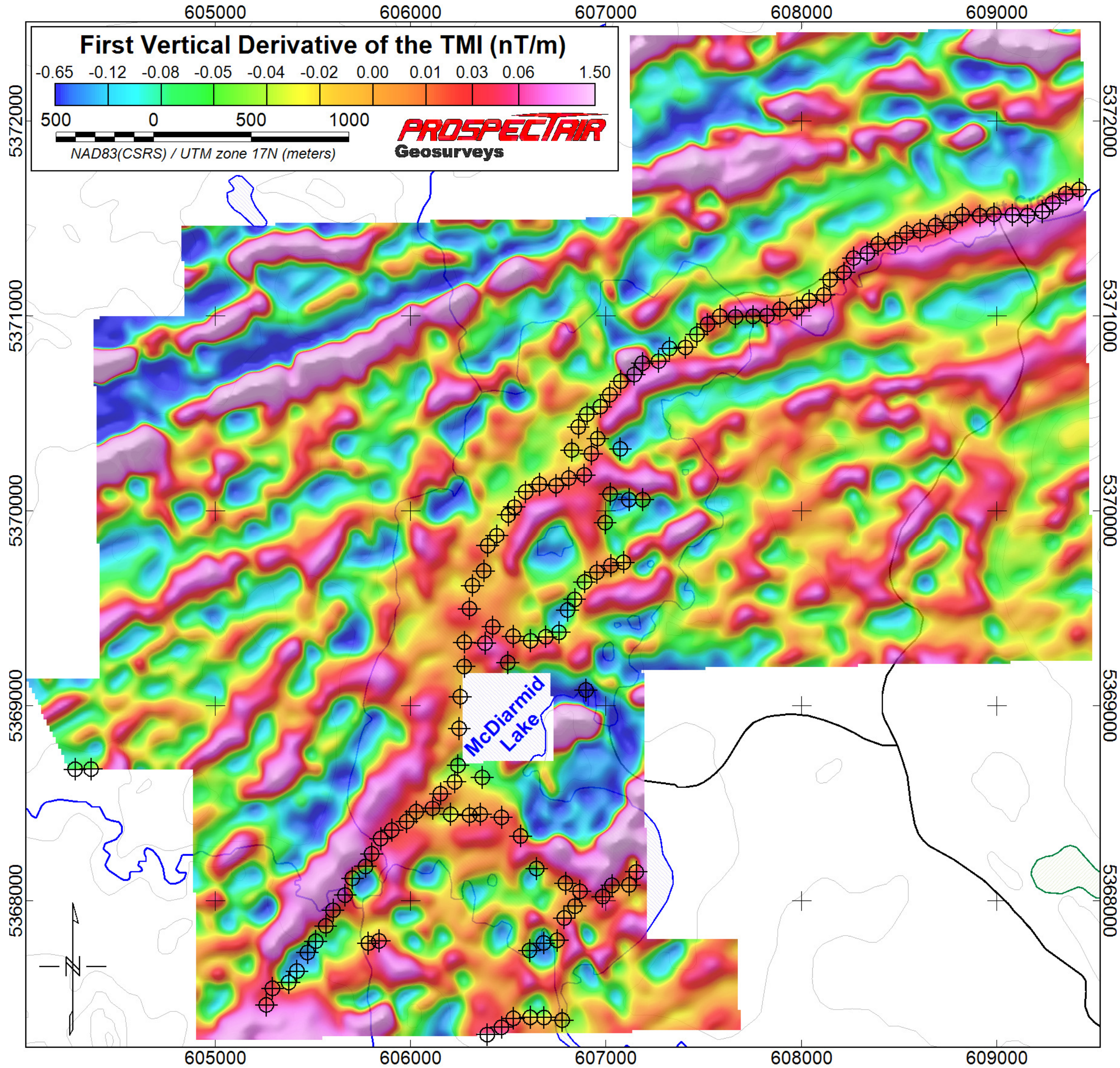


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Figure 10: **Magnetic tilt angle derivative and TDEM anomalies**

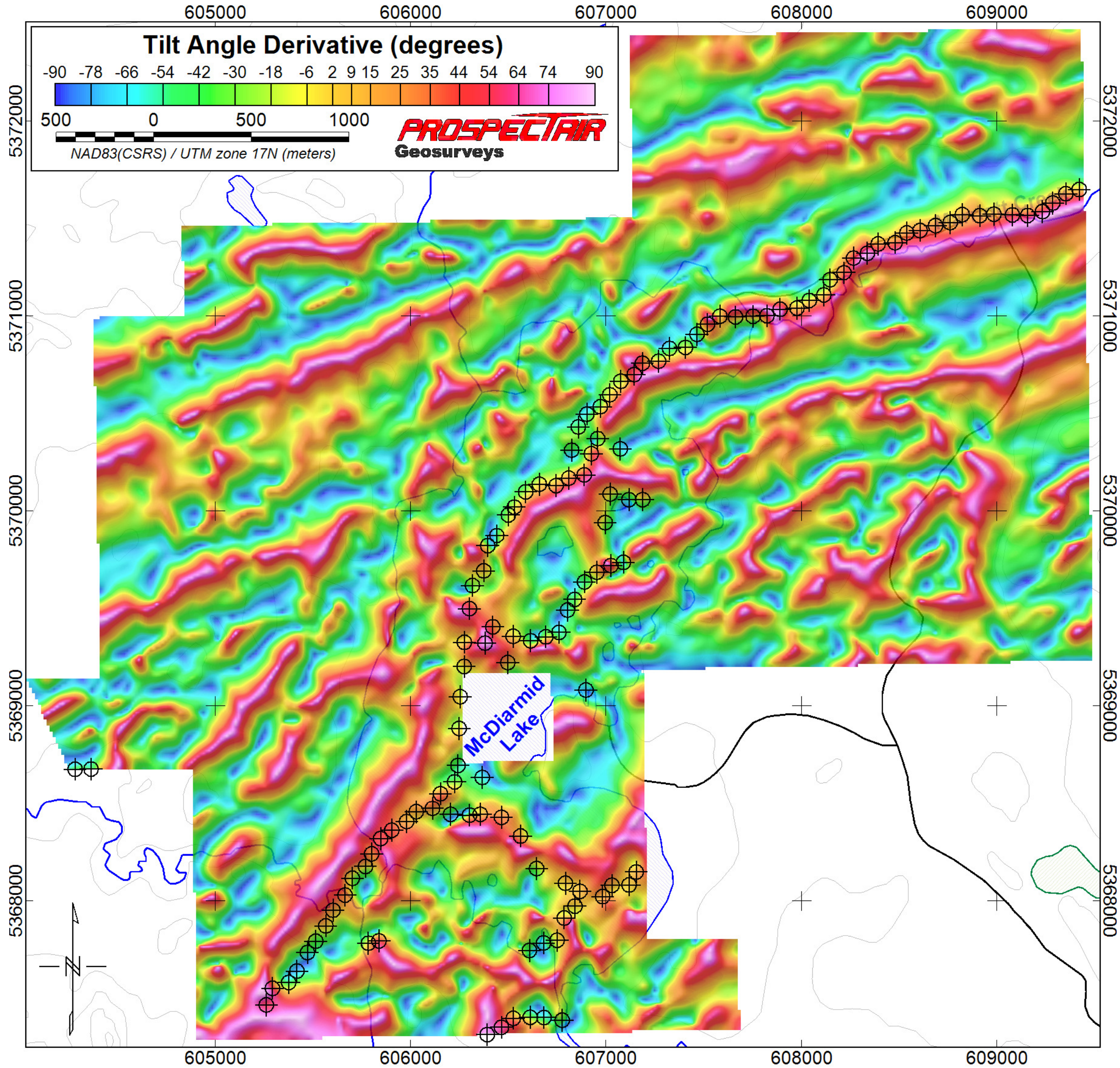


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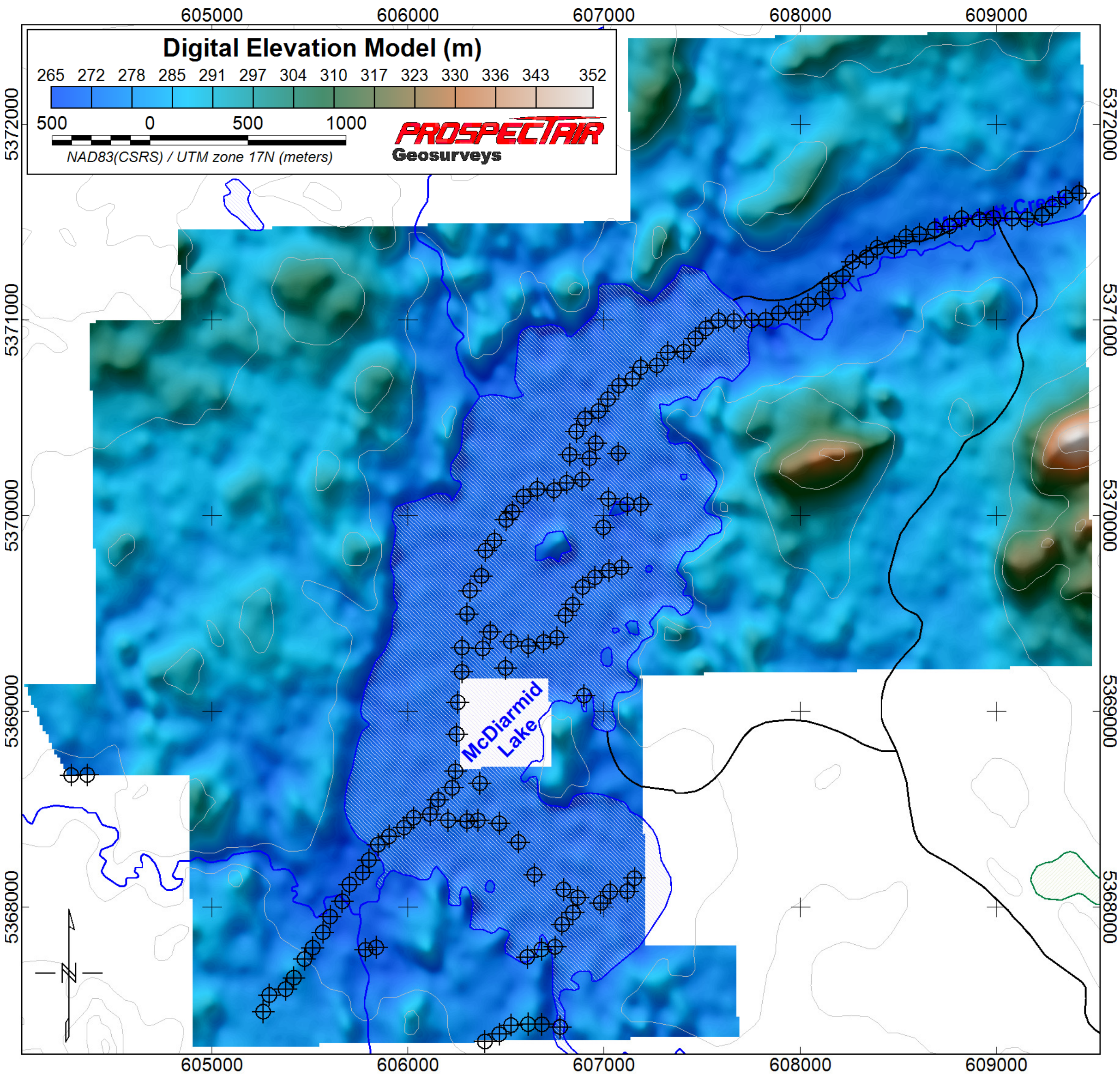
Figure 11: **Digital elevation model and TDEM anomalies**

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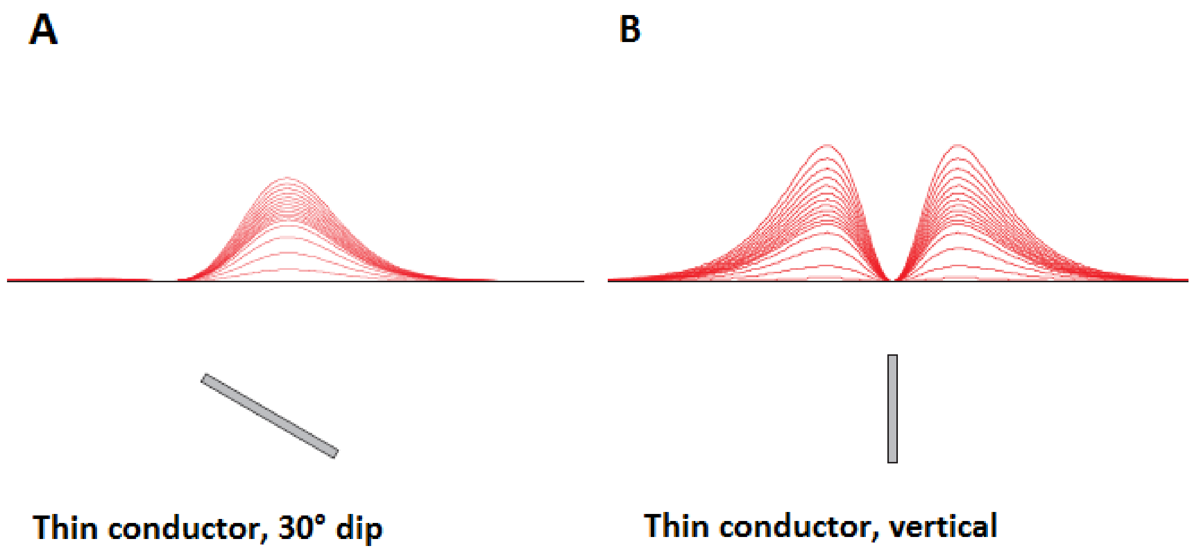
**Time-Domain Electromagnetic data**

There is no automatic picking program involved in the interpretation procedures of the ProspecTEM system. Identification of the EM anomalies is made from the EM profiles. Most of the time, the location of anomalies is based on the assumption that the causative source is a somewhat thick or flat lying conductor, which would generate an anomaly mostly centered over the conductor (Figure 12, A). It is important to understand that some other conductive bodies could generate a strong EM response that is offset from the mass centre of the source. For instance, a thin conductor with a steep dip would generate an "M" shape anomaly (Figure 12, B), with the stronger shoulder on the dip side. Therefore, caution must be taken when planning work at the location of an anomaly. It is recommended to combine other available geoscientific information and to review the EM anomaly location before to investigate an anomaly of interest.

Figure 12: **Example of EM response over thin conductors**



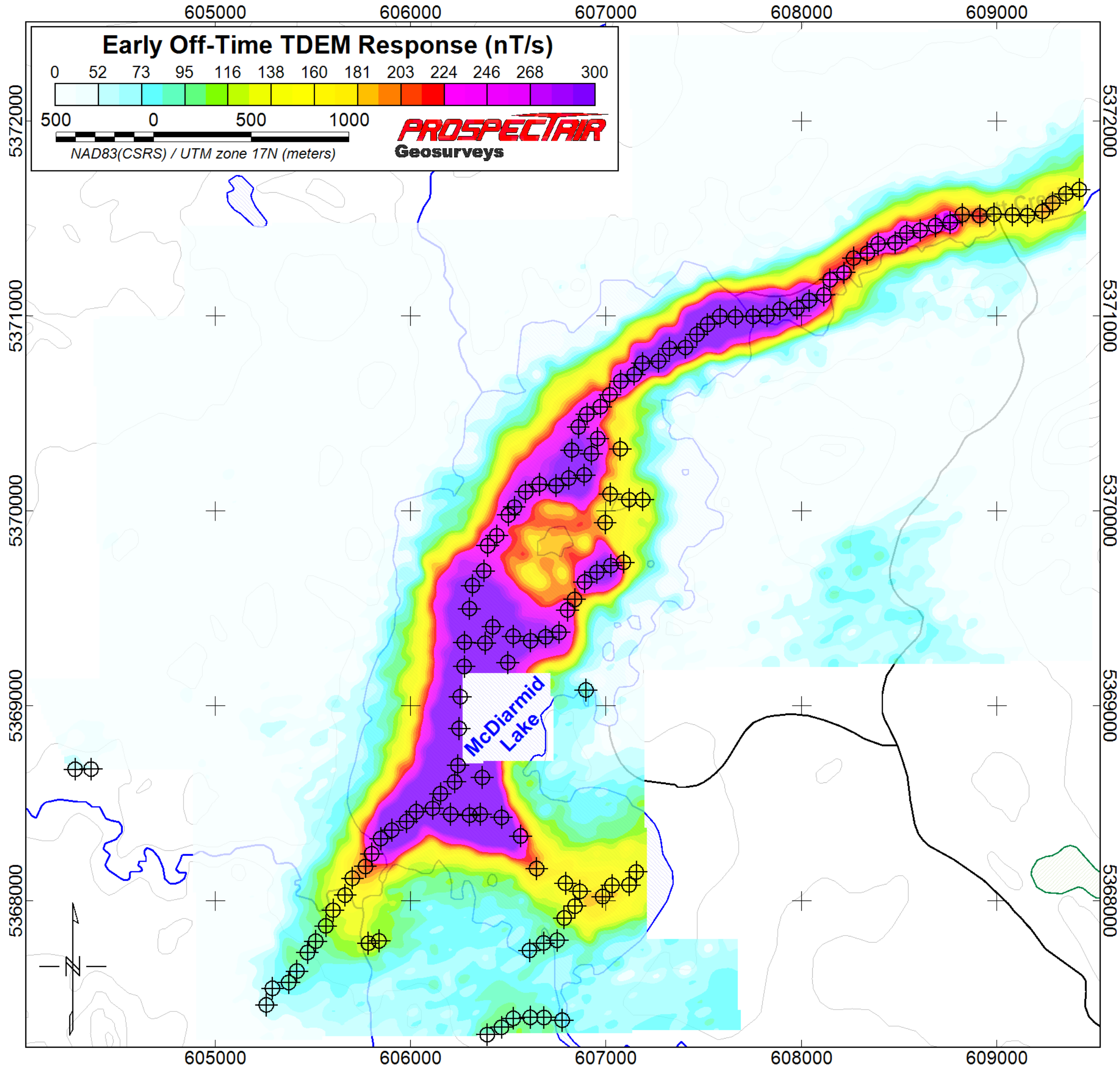

The classification of anomalies is based on the calculated time constant (TAU). The EM time constant is a general measure of the speed of decay of the electromagnetic response and reflects the "conductance quality" of a source. The decay rate of the secondary EM field recorded by the TDEM system is a function of the conductivity and geometry of conductors detected. A weak conductor, such as shallow conductive overburden, will show rapid response decay, thus a small value of the time constant. Conversely, a good conductor, such as a graphite or sulphide orebody, will have a response decaying slowly, relating to a large TAU value. The TAU is calculated using proprietary software and is derived from the best exponential least squares fit for channels Z13 to Z27. Calculating TAU for low amplitude anomalies that have their first off-time channel (channel 13) amplitude smaller than 75 nT/s can yield unreliable results given the weak response. As well, in some rare cases, despite stronger response of the first off-time channel, noise in the mid to late channels can cause the TAU estimation to be unreliable. No best fit were tried on these noisy or low signal anomalies and an arbitrary minimal time constant of 0.10 msec was attributed. Moreover, the resulting exponential best fit of the decay curve is extrapolated to the zero-delay time, which can be used to compare the amplitude of anomalies.

On the Field of Dreams block, 125 EM anomalies are identified, classified and listed (Appendix B). All marginal/weak anomalies with TAU lower than 0.25 msec are included in a group represented by an empty circle on the anomaly map. In total, all 125 anomalies are reported in this class. These anomalies are reported on all the figures of this section, and the symbols used are similar to the legend on the maps. The early off-time map and figure (Figure 13) provide a good overview of the TDEM response amplitude distribution.

All EM anomalies detected by this survey are characterized by EM responses of limited amplitude over relatively wide areas, with low TAU values, which is typical of poorly conductive overburden or bottom lake sediments. These marginally conductive areas are covering most of the Mc Diarmid Lake, depicting stronger amplitudes in the middle of the lake where flat lying conductive sediments are presumably thicker. These poorly conductive zones also extend further away from the lake, mostly within topographic depressions surrounding the lake, where water streams are also found locally. This said, it is interesting to note that the orientations of conductive anomalies defined by the survey are clearly aligned with magnetic trends. This suggests that a regional structure, potentially partly composed of poorly conductive clay minerals, could be highlighted by a combined conductive and magnetic response, also controlling the location of the McDiarmid Lake and topographic depressions aligned with it. This possible major structure would definitely be of exploration interest.

Lastly, it is important to point that the TDEM response amplitude is governed by three main factors: the conductivity of the source, the volume of the conductive source, and the distance between the source and the TDEM sensor. The anomaly shape is also dependant on the geometry of the conductive source, as exemplified in Figure 12. The connectivity between the conductive minerals is also critical for a source to be highly conductive. As a result, disseminated sulphides occurrences of economic interest are not necessarily responding to EM techniques. On the other hand, sulphide rich zones (in stringer, semi-massive or massive form) that are devoid of economic base metals will nevertheless respond strongly to TDEM.

Figure 13: **Early off-time TDEM response and anomalies**




Marriott Twp., Ontario

# VIII. WORK RECOMMENDATION

The discussion on the geological implication of the survey data is minimal in this report. A more general study including information regarding the local geology and all other geoscience data available in the area would be necessary to extract the full potential of the geophysical data and help to confirm and prioritize exploration targets.

The poorly conductive anomalies detected by this survey have a potential to relate to a regional structure affecting both the EM and magnetic responses in the area. This possible structure could be investigated with basic ground prospection methods at first. If interesting results are obtained, or if overburden proves too thick for prospecting, it is recommended to use the ground resistivity/IP technique to probe the potential structure for sulphides mineralization, with the hope to define targets for stripping and/or drilling. The implementation of a geochemical soil sampling program or of a till sampling program could also help to further prioritize outlined anomalies.

In addition, given the geological context that may be considered prospective for disseminated, non-conductive, sulphides mineralization, the magnetic data can also be used on its own to guide exploration efforts.

# IX. FINAL PRODUCTS

### Digital line data

The Geosoft database is provided with the channels detailed in Table 5.

Table 5: **MAG-TDEM line data channels**

| No. | Name | Description | Units |
|---|---|---|---|
| 1 | UTM_X | UTM Easting, NAD-83, Zone 17N | m |
| 2 | UTM_Y | UTM Northing, NAD-83, Zone 17N | m |
| 3 | Lat_deg | Latitude in decimal degrees (WGS-84) | Deg |
| 4 | Long_deg | Longitude in decimal degrees (WGS-84) | Deg |
| 5 | GPS_Z | Helicopter altitude (w.r.t. MSL) | m |
| 6 | Gtm_sec | Second since midnight GMT | Sec |
| 7 | Radar | Ground clearance given by the radar altimeter | m |
| 8 | Terrain | Digital Elevation Model calculated from GPS and Radar | m |
| 9 | Mag_Raw | Raw magnetic data | nT |
| 10 | Mag_Lag | Lagged magnetic data | nT |
| 11 | Gnd_mag | Base station magnetic data | nT |
| 12 | Mag_Cor | Magnetic data corrected for diurnal variation | nT |
| 13 | TMI | Fully levelled Total Magnetic Intensity | nT |
| 14 | TMIres | Residual TMI (IGRF removed) | nT |
| 15 | OFF_TIME | Amplitude of Off-time channels (13 to 36) | nT/s |

### Maps

All maps are referenced to NAD-83 in the UTM projection Zone 17 North, with coordinates in metres. Maps are at a 1:10,000 scale. They are provided in PDF, PNG, Geotiff and Geosoft MAP formats for the products detailed in Table 6.

Table 6: **Maps delivered**

| No. | Name | Description |
|---|---|---|
| 1 | DEM+FlightPath_Claims | Digital Elevation Model with flight path and properties claims |
| 2 | TMI | Residual Total Magnetic Intensity |
| 3 | FVD | First Vertical Derivative of the TMI |
| 4 | TILT | Tilt Angle Derivative of the TMI |
| 5 | Early_OffTime | Early_Off-Time TDEM response (Channel 13) |
| 6 | TDEM_Profiles+Anomalies | TDEM profiles with anomalies |
| 7 | FVD +TDEM_Anomalies | First Vertical Derivative of the TMI with TDEM anomalies |

**Grids**

All grids are referenced to NAD-83 in the UTM projection Zone 17 North, with coordinates in metres. Grids are provided in Geosoft GRD format, with a 15 m grid cell size, as well as in the Geotiff format for the products listed in Table 7.

Table 7: **Grids delivered**

| No. | Name | Description | Units |
|---|---|---|---|
| 1 | TERRAIN | Digital Elevation Model measured by helicopter | m |
| 2 | TMI | Total Magnetic Intensity | nT |
| 3 | FVD | First Vertical Derivative of TMI | nT/m |
| 4 | SVD | Second Vertical Derivative of TMI | $nT/m^2$ |
| 5 | TMIres | Residual TMI (IGRF removed) | nT |
| 6 | TILT | Tilt Angle Derivative of the TMI | Degree |
| 7 | Early_Off-Time | Early Off-Time TDEM response (Channel 13) | nT/s |
| 8 | Mid_Off-Time | Mid Off-Time TDEM response (Channel 20) | nT/s |
| 9 | Late_Off-Time | Late Off-Time TDEM response (Channel 27) | nT/s |

**Project report**

The report is submitted in PDF format. The anomaly table presented in annex is also provided as a separate Excel spreadsheet.

Respectfully submitted,


______________________

Joël Dubé, P.Eng.
October 16, 2024

# X. Statement of Qualifications

Joël Dubé
7977 Décarie Drive
Ottawa, ON, Canada, K1C 3K3

Phone: 819.598.8486
E-mail: jdube@ddgeoscience.ca

I, Joël Dubé, P.Eng., do hereby certify that:

1. I am a Professional Engineer specialized in geophysics, President of Dynamic Discovery Geoscience Ltd., registered in Canada.

2. I earned a Bachelor of Engineering in Geological Engineering in 1999 from the École Polytechnique de Montréal.

3. I am an Engineer registered with the Ordre des Ingénieurs du Québec, No. 122937, and a Professional Engineer with Professional Engineers Ontario, No. 100194954 (CofA No. 100219617), with the Association of Professional Engineers and Geoscientists of New Brunswick, No. L5202 (CofA No. F1853), with the Association of Professional Engineers of Nova Scotia, No. 11915 (CofC No. 51099), with Engineers Geoscientists Manitoba, No. 43414. (CofA No. 6897), with Professional Engineers & Geoscientists Newfoundland & Labrador, No. 10012 (PtoP No. N1134) and with the Northwest Territories & Nunavut Association of Professional Engineers & Geoscientists, No. L4447 (PtoP No. P1414).

4. I have practised my profession for 25 years in exploration geophysics.

5. I have not received and do not expect to receive a direct or indirect interest in the properties covered by this report.

Dated this 16th day of October, 2024


______________________________
Joël Dubé, P.Eng. #100194954

# XI. Appendix A – Survey block outline

**Field of Dreams Block**

| Easting | Northing |
|---|---|
| 607682 | 5367340 |
| 604904 | 5367288 |
| 604878 | 5368677 |
| 604250 | 5368666 |
| 604033 | 5369130 |
| 604408 | 5369137 |
| 604373 | 5370989 |
| 604835 | 5370998 |
| 604827 | 5371461 |
| 607136 | 5371504 |
| 607118 | 5372431 |
| 609432 | 5372475 |
| 609495 | 5369228 |
| 607185 | 5369184 |
| 607211 | 5367799 |
| 607673 | 5367808 |

# XII. Appendix B – Property claims covered by the survey

| Tenure number | Holder | l-km within claim |
|---|---|---|
| 824131 | (100) Goldenfire Minerals Inc. | 3.128 |
| 824132 | (100) Goldenfire Minerals Inc. | 3.129 |
| 824213 | (100) Goldenfire Minerals Inc. | 3.129 |
| 876912 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876913 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876914 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876915 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876916 | (100) Goldenfire Minerals Inc. | 3.126 |
| 876917 | (100) Goldenfire Minerals Inc. | 3.126 |
| 876918 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876919 | (100) Goldenfire Minerals Inc. | 3.126 |
| 876920 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876921 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876922 | (100) Goldenfire Minerals Inc. | 3.126 |
| 876923 | (100) Goldenfire Minerals Inc. | 3.126 |
| 876924 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876925 | (100) Goldenfire Minerals Inc. | 3.126 |
| 876926 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876927 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876928 | (100) Goldenfire Minerals Inc. | 3.126 |
| 876929 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876930 | (100) Goldenfire Minerals Inc. | 3.126 |
| 876931 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876932 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876933 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876934 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876935 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876936 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876937 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876938 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876939 | (100) Goldenfire Minerals Inc. | 3.126 |
| 876940 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876941 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876942 | (100) Goldenfire Minerals Inc. | 3.126 |
| 876943 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876944 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876945 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876946 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876952 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876953 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876954 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876955 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876956 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876957 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876958 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876959 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876960 | (100) Goldenfire Minerals Inc. | 3.128 |

| Tenure number | Holder | l-km within claim |
|---|---|---|
| 876961 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876962 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876963 | (100) Goldenfire Minerals Inc. | 3.129 |
| 876964 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876965 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876966 | (100) Goldenfire Minerals Inc. | 3.129 |
| 876967 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876968 | (100) Goldenfire Minerals Inc. | 3.128 |
| 876969 | (100) Goldenfire Minerals Inc. | 3.129 |
| 876970 | (100) Goldenfire Minerals Inc. | 3.129 |
| 876971 | (100) Goldenfire Minerals Inc. | 3.129 |
| 876972 | (100) Goldenfire Minerals Inc. | 3.129 |
| 876973 | (100) Goldenfire Minerals Inc. | 3.129 |
| 876974 | (100) Goldenfire Minerals Inc. | 3.129 |
| 876975 | (100) Goldenfire Minerals Inc. | 3.129 |
| 876976 | (100) Goldenfire Minerals Inc. | 3.129 |
| 876977 | (100) Goldenfire Minerals Inc. | 3.129 |
| 876978 | (100) Goldenfire Minerals Inc. | 3.129 |
| 876979 | (100) Goldenfire Minerals Inc. | 3.129 |
| 876980 | (100) Goldenfire Minerals Inc. | 3.129 |
| 888400 | (100) Goldenfire Minerals Inc. | 3.128 |
| 888401 | (100) Goldenfire Minerals Inc. | 3.128 |
| 888404 | (100) Goldenfire Minerals Inc. | 3.128 |
| 888405 | (100) Goldenfire Minerals Inc. | 3.128 |
| 888406 | (100) Goldenfire Minerals Inc. | 3.128 |
| 888407 | (100) Goldenfire Minerals Inc. | 3.128 |
| 888408 | (100) Goldenfire Minerals Inc. | 3.128 |
| 888409 | (100) Goldenfire Minerals Inc. | 3.128 |
| 888410 | (100) Goldenfire Minerals Inc. | 3.128 |
| 888411 | (100) Goldenfire Minerals Inc. | 3.128 |
| 888412 | (100) Goldenfire Minerals Inc. | 3.128 |
| 888413 | (100) Goldenfire Minerals Inc. | 3.128 |
| 888414 | (100) Goldenfire Minerals Inc. | 3.128 |
| 888415 | (100) Goldenfire Minerals Inc. | 3.128 |
| 888416 | (100) Goldenfire Minerals Inc. | 3.128 |
| 888417 | (100) Goldenfire Minerals Inc. | 3.128 |
| 888418 | (100) Goldenfire Minerals Inc. | 3.128 |
| 888419 | (100) Goldenfire Minerals Inc. | 3.128 |
| 888420 | (100) Goldenfire Minerals Inc. | 3.128 |

# XIII. Appendix C – Field of Dreams block TDEM anomaly table

| Line | UTM_X (m) | UTM_Y (m) | ID | Time Constant (msec) | Amplitude at zero delay (nT/s) |
|---|---|---|---|---|---|
| 10 | 604279 | 5368675 | 10.01 | 0.10 | 0 |
| 20 | 604361 | 5368676 | 20.01 | 0.10 | 0 |
| 60 | 605259 | 5367468 | 60.01 | 0.10 | 0 |
| 70 | 605290 | 5367553 | 70.01 | 0.10 | 0 |
| 80 | 605373 | 5367583 | 80.01 | 0.20 | 301 |
| 90 | 605415 | 5367641 | 90.01 | 0.12 | 679 |
| 100 | 605469 | 5367736 | 100.01 | 0.21 | 310 |
| 110 | 605512 | 5367794 | 110.01 | 0.18 | 388 |
| 120 | 605564 | 5367872 | 120.01 | 0.17 | 467 |
| 130 | 605600 | 5367952 | 130.01 | 0.17 | 577 |
| 140 | 605781 | 5367784 | 140.01 | 0.14 | 739 |
| 140 | 605662 | 5368030 | 140.02 | 0.13 | 1008 |
| 150 | 605836 | 5367795 | 150.01 | 0.20 | 435 |
| 150 | 605699 | 5368116 | 150.02 | 0.14 | 1060 |
| 160 | 605767 | 5368176 | 160.01 | 0.12 | 1572 |
| 170 | 605798 | 5368240 | 170.01 | 0.13 | 1686 |
| 180 | 605844 | 5368319 | 180.01 | 0.12 | 2332 |
| 190 | 606390 | 5367317 | 190.01 | 0.11 | 769 |
| 190 | 605901 | 5368361 | 190.02 | 0.12 | 3280 |
| 200 | 606463 | 5367354 | 200.01 | 0.13 | 615 |
| 200 | 605977 | 5368406 | 200.02 | 0.13 | 2452 |
| 210 | 606524 | 5367400 | 210.01 | 0.09 | 1511 |
| 210 | 606027 | 5368456 | 210.02 | 0.15 | 1951 |
| 220 | 606610 | 5367405 | 220.01 | 0.14 | 574 |
| 220 | 606110 | 5368473 | 220.02 | 0.14 | 2502 |
| 230 | 606681 | 5367404 | 230.01 | 0.14 | 504 |
| 230 | 606203 | 5368443 | 230.02 | 0.15 | 2178 |
| 230 | 606150 | 5368550 | 230.03 | 0.15 | 2097 |
| 240 | 606774 | 5367390 | 240.01 | 0.14 | 459 |
| 240 | 606607 | 5367747 | 240.02 | 0.15 | 442 |
| 240 | 606300 | 5368438 | 240.03 | 0.13 | 3405 |
| 240 | 606223 | 5368610 | 240.04 | 0.14 | 3023 |
| 250 | 606678 | 5367785 | 250.01 | 0.14 | 535 |
| 250 | 606355 | 5368443 | 250.02 | 0.11 | 4709 |
| 250 | 606240 | 5368695 | 250.03 | 0.14 | 2664 |
| 260 | 606748 | 5367798 | 260.01 | 0.15 | 501 |
| 260 | 606463 | 5368427 | 260.02 | 0.12 | 3306 |
| 260 | 606365 | 5368633 | 260.03 | 0.12 | 3334 |
| 260 | 606246 | 5368884 | 260.04 | 0.14 | 2224 |
| 270 | 606784 | 5367913 | 270.01 | 0.19 | 485 |
| 270 | 606643 | 5368165 | 270.02 | 0.12 | 1548 |
| 270 | 606561 | 5368331 | 270.03 | 0.14 | 1487 |
| 270 | 606252 | 5369047 | 270.04 | 0.14 | 1904 |
| 280 | 606840 | 5367973 | 280.01 | 0.12 | 1360 |
| 280 | 606791 | 5368090 | 280.02 | 0.13 | 1175 |
| 280 | 606272 | 5369201 | 280.03 | 0.15 | 1751 |
| 290 | 606865 | 5368049 | 290.01 | 0.11 | 1534 |
| 290 | 606273 | 5369325 | 290.02 | 0.13 | 2632 |
| 300 | 606981 | 5368022 | 300.01 | 0.13 | 1272 |
| 300 | 606379 | 5369321 | 300.02 | 0.13 | 2962 |
| 300 | 606299 | 5369497 | 300.03 | 0.13 | 2355 |
| 310 | 607029 | 5368080 | 310.01 | 0.11 | 1503 |
| 310 | 606496 | 5369221 | 310.02 | 0.13 | 2011 |
| 310 | 606419 | 5369404 | 310.03 | 0.15 | 2046 |

| | | | | | |
|---|---|---|---|---|---|
| 310 | 606314 | 5369616 | 310.04 | 0.15 | 1750 |
| 320 | 607117 | 5368082 | 320.01 | 0.12 | 1134 |
| 320 | 606523 | 5369356 | 320.02 | 0.14 | 2085 |
| 320 | 606372 | 5369691 | 320.03 | 0.14 | 1772 |
| 330 | 607153 | 5368148 | 330.01 | 0.20 | 542 |
| 330 | 606613 | 5369333 | 330.02 | 0.15 | 1638 |
| 330 | 606393 | 5369820 | 330.03 | 0.13 | 1823 |
| 340 | 606690 | 5369353 | 340.01 | 0.14 | 1833 |
| 340 | 606439 | 5369873 | 340.02 | 0.12 | 1931 |
| 350 | 606896 | 5369081 | 350.01 | 0.24 | 233 |
| 350 | 606758 | 5369376 | 350.02 | 0.14 | 1640 |
| 350 | 606499 | 5369979 | 350.03 | 0.14 | 1633 |
| 360 | 606802 | 5369490 | 360.01 | 0.15 | 1326 |
| 360 | 606529 | 5370020 | 360.02 | 0.12 | 2298 |
| 371 | 606838 | 5369544 | 371.01 | 0.14 | 1167 |
| 371 | 606587 | 5370098 | 371.02 | 0.12 | 2199 |
| 380 | 606888 | 5369634 | 380.01 | 0.11 | 2569 |
| 380 | 606657 | 5370137 | 380.02 | 0.13 | 1962 |
| 390 | 606952 | 5369683 | 390.01 | 0.13 | 2121 |
| 390 | 606743 | 5370130 | 390.02 | 0.14 | 2006 |
| 400 | 607024 | 5369718 | 400.01 | 0.11 | 2985 |
| 400 | 606808 | 5370168 | 400.02 | 0.13 | 2356 |
| 410 | 607088 | 5369734 | 410.01 | 0.15 | 971 |
| 410 | 606994 | 5369940 | 410.02 | 0.18 | 702 |
| 410 | 606887 | 5370185 | 410.03 | 0.12 | 2423 |
| 410 | 606823 | 5370312 | 410.04 | 0.14 | 1835 |
| 420 | 607020 | 5370087 | 420.01 | 0.15 | 941 |
| 420 | 606923 | 5370293 | 420.02 | 0.12 | 2443 |
| 420 | 606857 | 5370430 | 420.03 | 0.13 | 1979 |
| 430 | 607116 | 5370058 | 430.01 | 0.17 | 747 |
| 430 | 606956 | 5370371 | 430.02 | 0.14 | 1657 |
| 430 | 606901 | 5370496 | 430.03 | 0.16 | 1325 |
| 440 | 607186 | 5370058 | 440.01 | 0.15 | 703 |
| 440 | 607072 | 5370318 | 440.02 | 0.13 | 1257 |
| 440 | 606970 | 5370535 | 440.03 | 0.12 | 2005 |
| 450 | 607018 | 5370596 | 450.01 | 0.15 | 1230 |
| 460 | 607075 | 5370665 | 460.01 | 0.13 | 1986 |
| 470 | 607143 | 5370699 | 470.01 | 0.13 | 1967 |
| 480 | 607185 | 5370757 | 480.01 | 0.11 | 3529 |
| 490 | 607268 | 5370768 | 490.01 | 0.11 | 3421 |
| 500 | 607324 | 5370833 | 500.01 | 0.12 | 3094 |
| 510 | 607405 | 5370838 | 510.01 | 0.13 | 2628 |
| 520 | 607464 | 5370906 | 520.01 | 0.11 | 3411 |
| 530 | 607519 | 5370957 | 530.01 | 0.13 | 2756 |
| 540 | 607582 | 5370998 | 540.01 | 0.12 | 3249 |
| 550 | 607662 | 5370995 | 550.01 | 0.14 | 2367 |
| 560 | 607752 | 5370998 | 560.01 | 0.13 | 2480 |
| 570 | 607823 | 5371001 | 570.01 | 0.10 | 3759 |
| 580 | 607890 | 5371034 | 580.01 | 0.12 | 3203 |
| 590 | 607977 | 5371040 | 590.01 | 0.11 | 3031 |
| 600 | 608039 | 5371079 | 600.01 | 0.12 | 2634 |
| 610 | 608114 | 5371107 | 610.01 | 0.13 | 1828 |
| 620 | 608146 | 5371186 | 620.01 | 0.12 | 2084 |
| 630 | 608218 | 5371223 | 630.01 | 0.13 | 1671 |
| 640 | 608266 | 5371299 | 640.01 | 0.10 | 2744 |
| 650 | 608337 | 5371323 | 650.01 | 0.11 | 2136 |
| 660 | 608392 | 5371371 | 660.01 | 0.12 | 2190 |
| 670 | 608479 | 5371378 | 670.01 | 0.14 | 1633 |
| 680 | 608539 | 5371427 | 680.01 | 0.11 | 2550 |
| 690 | 608607 | 5371440 | 690.01 | 0.13 | 1741 |
| 700 | 608686 | 5371465 | 700.01 | 0.13 | 1738 |

| | | | | | |
|---|---|---|---|---|---|
| 710 | 608761 | 5371480 | 710.01 | 0.13 | 1666 |
| 720 | 608823 | 5371521 | 720.01 | 0.12 | 1714 |
| 730 | 608913 | 5371516 | 730.01 | 0.15 | 1093 |
| 740 | 608985 | 5371523 | 740.01 | 0.15 | 933 |
| 750 | 609080 | 5371520 | 750.01 | 0.14 | 1101 |
| 760 | 609158 | 5371517 | 760.01 | 0.11 | 1488 |
| 770 | 609234 | 5371537 | 770.01 | 0.14 | 1223 |
| 780 | 609287 | 5371581 | 780.01 | 0.12 | 1553 |
| 790 | 609354 | 5371628 | 790.01 | 0.11 | 1632 |
| 800 | 609422 | 5371650 | 800.01 | 0.14 | 860 |

Appendix to: Work Report 7429

**Technical Report**
**High-Resolution Heliborne Magnetic**
**and TDEM Survey**
**Field of Dreams Project, Kirkland Lake Area,**
**Larder Lake Mining Division, Ontario, 2024**
**By: Prospectair Geosurveys**

**For: Transpacific Resources Inc.**

## Index



## Property Logistics

The Field of Dreams (FOD) Property is located at the junction of Holloway, Marriott and Tannahill townships in the Larder Lake Mining Division, Ontario. The property is located approximately 60 kilometres east of the town of Matheson (Figure 1). It is bordered to the east by the province of Quebec.

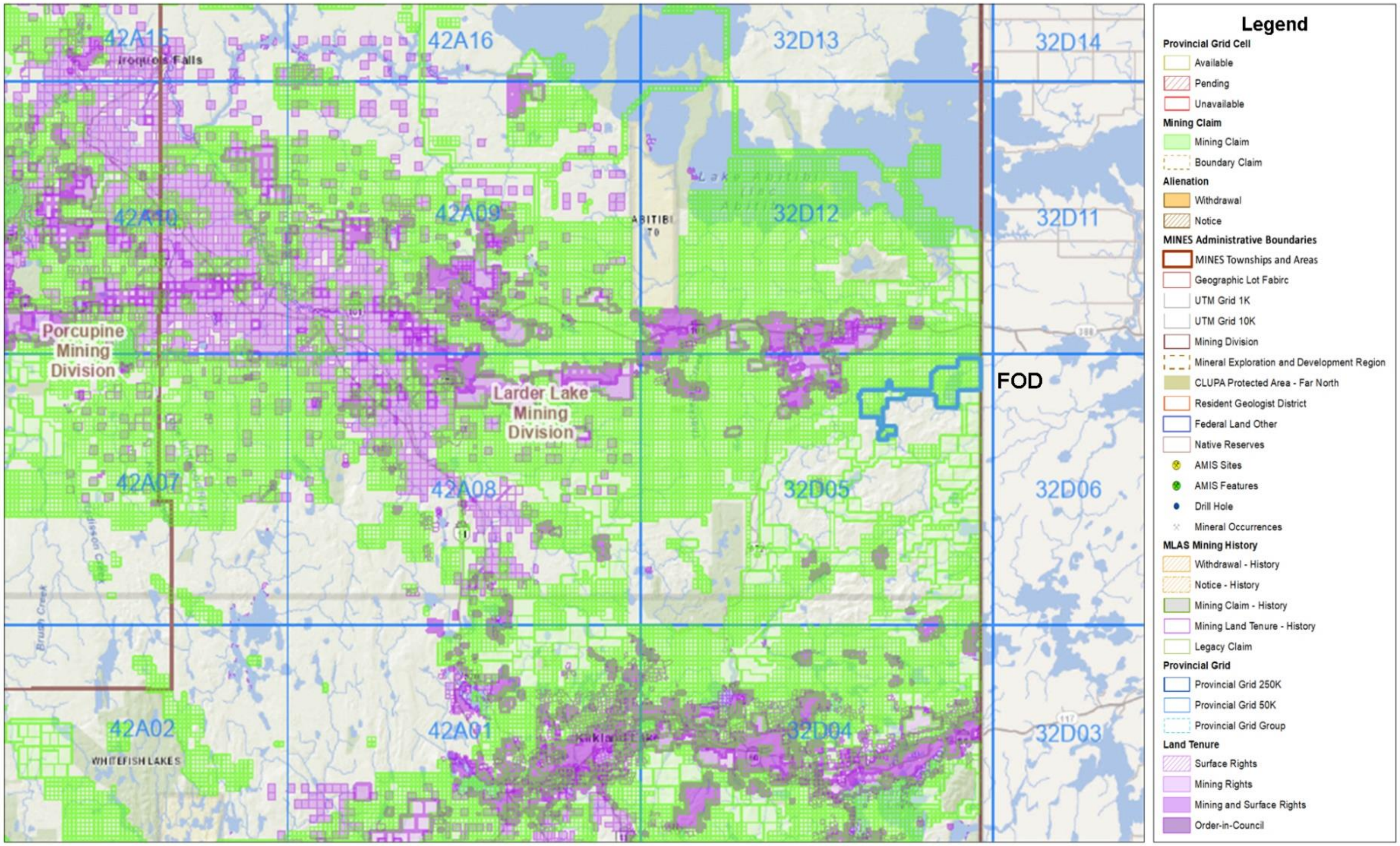
The property can be reached from the town of Matheson by travelling east on Highway 101 for approximately 59 km to the intersection of Magusi/ Roscoe Road. Travel south on the Magusi/ Roscoe Road. The Field of Dreams Property crosses the road approximately 7.7 km south of Highway 101.

Figure 2 outines the extent of the FOD Property in Ontario. The property covers sections of Holloway, Tannahill and Marriott townships and contains 145 mining claims consisting of 152 cells and 1 boundary cell.

Ontario — Ministry of Mines (MINES)

MLAS Map Viewer

Figure 1. Property Location Map
Field of Dreams Property (FOD)
Transpacific Resources Inc.




Those wishing to register mining claims should consult with the Provincial Mining Recorders' Office of the Ministry of Mines (MINES) for additional information on the status of the lands shown hereon. This map is not intended for navigational, survey, or land title determination purposes as the information shown on this map is compiled from various sources. Completeness and accuracy are not guaranteed. Additional information may also be obtained through the local Land Titles or Registry Office, or the Ministry of Natural Resources and Forestry. The information shown is derived from digital data available in the Provincial Mining Recorders' Office at the time of downloading from the Ministry of Mines (MINES) web site.

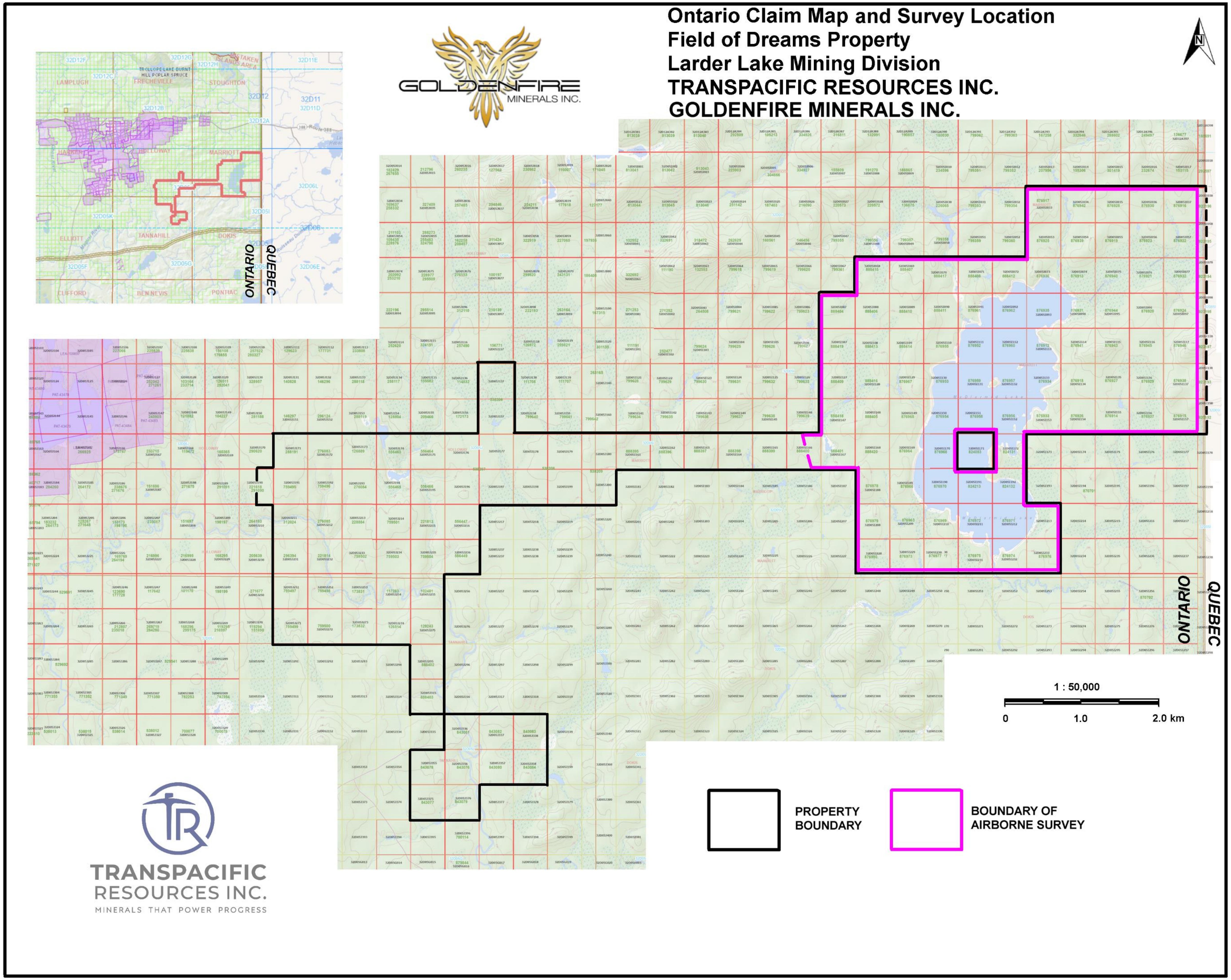
0 — 28.11 km

N

Projection: Web Mercator

Imagery Copyright Notices: Ministry of Natural Resources and Forestry (MNRF); NASA Landsat Program; First Base Solutions Inc.; Aéro-Photo (1961) Inc.; DigitalGlobe Inc.; U.S. Geological Survey.) web site.





Ontario Claim Map and Survey Location
Field of Dreams Property
Larder Lake Mining Division
TRANSPACIFIC RESOURCES INC.
GOLDENFIRE MINERALS INC.
GOLDENFIRE MINERALS INC.
N
ONTARIO
QUEBEC
1 : 50,000
0
1.0
2.0 km
PROPERTY BOUNDARY
BOUNDARY OF AIRBORNE SURVEY
TRANSPACIFIC RESOURCES INC.
MINERALS THAT POWER PROGRESS


Figure 2.

Field of Dreams Claim List 2024

Transpacific Resources Inc.

Holloway, Tannahill and Marriott Twp.'s, Ontario

276084, 276083, 221618, 288191, 126889, 312024, 228884, 276085, 221814, 221813, 296394, 173831, 117283, 102481, 173832, 126514, 129243, 876967, 876974, 843078, 876913, 876921, 876922, 876930, 876934, 876939, 888406, 888411, 888416, 556465, 876952, 876964, 876966, 843076, 843081, 876924, 876940, 876943, 876946, 888400, 888401, 888403, 824213, 876954, 876968, 876969, 876970, 876972, 843083, 876918, 876925, 876932, 876937, 876942, 888395, 888413, 888420, 759498, 759500, 876956, 876973, 876975, 876977, 824132, 759501, 876919, 876929, 876933, 876944, 888396, 888397, 888402, 888404, 888410, 888415, 888419, 538209, 538206, 759496, 876953, 876962, 876963, 876965, 876971, 876980, 843082, 876914, 876920, 876926, 876941, 888408 888409, 556466, 538207, 538208, 556447, 876957, 876958, 876960, 876976, 876978, 824131, 876915, 876945, 888398, 888412, 888417, 876959, 843079, 843084, 759502, 759503, 759504, 876912, 876927, 876931, 876936, 876938, 759499, 556463, 759495, 876955, 876961, 876979, 843077, 843080, 876917, 876928, 876935, 888399, 888405, 888407, 888414, 888418, 759497, 556449, 556464, 876916, 876923

History of Exploration: Field of Dreams Property (FOD)
Tannahill, Holloway and Marriot Twp.'s, Ontario

| Year & Company | Survey Type | File Number | Results |
|---|---|---|---|
| 1927-1928: Marriott Mines Ltd | | MDI32D03NE00004 | Marriott Mines Ltd. was incorporated (Rogers and Young 1928, Gledhill 1929) and trenched about 500 feet and diamond drilled about 5,000 feet (in at least 18 holes) on a small peninsula extending into southeastern McDiarmid Lake. The trenching is reported to have exposed massive chalcopyrite and bornite localized along an andesite/rhyolite contact, one channel sample (of unspecified length) from which is reported to have averaged 7% of copper, 0.06 ounce of silver per ton, and traces of gold. The diamond drilling is reported to have established the continuity of the sulfide mineralization to at least the vertical 440 foot level (along an undisclosed strike length) and to have established that at depth, sulfide mineralization ranging from 5 to 15 feet in (apparent?) width occurs, with additional associated disseminated chalcopyrite in andesite. This work is situated east of McDiarmid Lake in cell 32D05I172 and possibly cell 32D05I171. |
| 1982: Canada Nickel Company | Airborne Magnetometer & VLF-EM | 32D12SE0038 | Survey partially covered the north and midsection of the FOD property in the vicinity to the Holloway-Marriot township boundary. Survey outlined a series of NE trending magnetic features in the area partially cover north section of FOD. |
| 1986: Edda Resources Inc | Airborne Magnetometer & VLF-EM | 32D12SE0015 | Survey is mostly situated north of FOD Property and only covers cells 32D05J137 & 32D05J157, claim 538206. Survey outlines NE trending weak magnetic feature crossing claim 538206. |
| 1986: A W Hennessey | Airborne Magnetometer & VLF-EM | 32D12SE0097 | South section of survey over "Area A-2" covered area along north boundary of FOD property north of McDiarmid Lake. No anomalies outlined. |
| 1987: D.M. Louie, K. Cright | Airborne Magnetometer & VLF-EM | 32D12SE0093 | Outlined a NE trending magnetic anomaly on border of FOD property NW of McDiarmid Lake. |
| 1951: Tenendo Mining Corp | Diamond Drilling | 32D05NE0081 | Three holes drilled of length 122 ft., 130 ft, and 115 ft. east of McDiarmid Lake in cell 32D05I172 and possibly cell 32D05I171. Holes were drilled under trenches. Although sulphides are noted, no assays were reported. |
| 1969: Camflo Mattagami Mines Ltd. | Diamond Drilling | 32D05NE0080 | Two holes drilled of length 705 ft. and 350ft. east of McDiarmid Lake in cell 32D05I172. Low gold values of 0.01 to 0.02 oz/ton reported. |
| 1973: Falconbridge Nickel Mines Ltd | Diamond Drilling | 32D05NE0082 | Six holes ranging 28 ft to 217 ft in length totalling 691 ft. east of McDiarmid Lake in cell 32D05I172 and possibly cell 32D05I171. Minor pyrite and chalcopyrite noted in several holes however, no assays reported. |

| Year & Company | Survey Type | File Number | Results |
|---|---|---|---|
| 1993: Sudbury Contact Mines Limited | Diamond Drilling | 32D05NE0060 | Hole drilled into lenticular magnetic feature known as B-Target situated in 32D05J254 & 32D05J274 FOD property. Hole intersected massive gabbro with a minor section of pyroxenite. Strong pyrrhotite mineralization with minor chalcopyrite and pyrite intergrowths was intersected from 71.3 to 85.0 metres. Selective sampling of this section yielded consistent copper values on the 0.1% range and consistent nickel values in the 0.25% range. Chlorite-serpentine sulphide alteration in the gabbro was intersected at the bottom of the hole, with selective sampling indicating anomalous copper, nickel and gold values. |
| 2004: Woodruff Capital Management Inc | Diamond Drilling | 32D05NE2045 | One hole, MD-01 totalling 615 m was drilled NE of McDiarmid Lake in cell 32D05I057. The hole tested a felsic unit. Disseminated pyrite ranging 1-5% was noted throughout the hole with stronger mineralization up to 30% was intersected over a 3 m section starting at a depth of 476.2 m. No assays reported. |
| 2007: Inmet Mining Inc. | Diamond Drilling | 20000002966 | One hole, MD-02 totalling 325 m was drilled to test the felsic unit NE of McDiarmid Lake in cell 32D05I057. Disseminated pyrite and chalcopyrite were noted. A 31.35 m strong fault zone was intersected at a 257.85 m. Although gold values were low, a 0.30 m section at a depth of 100.8 m assayed 0.71% copper. |
| 2008: Inmet Mining Inc. | Diamond Drilling | 20000003457 | One hole, MD-03, totalling 387 m was drilled to test the felsic unit NE of McDiarmid Lake in cell 32D05I095. The hole intersected local traces to 3% of pyrite and local traces of chalcopyrite. A 23 cm thick interval of 25-30% sphalerite and 1-3% chalcopyrite was intersected in the rhyolite at 297.60m. This section assayed 0.95% Cu and 21% Zn 0ver 0.25 m. A 1.3 m section starting at 122.5 m returned 0.179% Zn, 0.07% Pb and 483 ppb Au. |
| 2008: Cogitore Resources Inc | Bore-hole Pulse EM survey | 20000003458 | Hole MD-03 by Inmet Mining Inc in cell 32D05I095 was tested by a Borehole Pulse EM survey. No anomalies were detected. |
| 2007-2012 | Drill Core Sampling | 20000003361<br>20000002277<br>20000007189 | R. MacGregor, on behalf of Skead Headings Inc. located and resampled core from Sudbury Contact Mines Limited 1993 drill hole into the B-Target in cells 32D05J254 & 32D05J274. The sampling showed 0.17% Ni and 0.052% Cu over a core length of 57 m and included a section assaying 0.243% Ni, 0.1% Cu, 0.02% Co and 125 ppb Pd over a core length of 14.3 m starting at a depth of 71.3 m. The hole ended in lower section of mineralization assaying 0.154% Ni, 0.09% Cu, 114 ppb Pd over 3 m with a 1m section containing 380 ppb Au. |

| Year & Company | Survey Type | File Number | Results |
|---|---|---|---|
| 2008-2009 Skead Holdings Inc. | Mobile Metal Ionization (MMI) Survey | 20000004253 | A small grid totalling 2.5 km was cut consisting of a 600 m baseline orientated at $351^0$N and two crosslines at 0N and 6N, extending from 7W to 4E and 4W to 4E respectively. The survey outlined a Ni-Cu-Co-Au-Ag anomaly extending from 4W to 1E in the area of 5N to 6N. This area roughly coincides with Sudbury Contacts B-Target situated on the FOD Property in cells 32D05J254 & 32D05J274. |
| 1997: Queenston Mining Inc. | Line cutting, prospecting, Geological Mapping | 32D05NE2005 | Prospecting and geological mapping were conducted in area extending from cells 32D05J172 to 32D05J176 and south to the Holloway-Tannahill township boundary. It was reported outcrop exposure was rare. Seven whole rock samples were collected. Nothing significant was reported. |
| 2007: Tiger Gold Exploration Corp | Geological mapping | 20000002245 | An area between cells 32D05J157, 32D05J177, 32D05J197 and 32D05J217 extending east to the Holloway Twp. boundary was mapped in good detail. Several mafic metavolcanic outcrops were located close to the township line. No mineralization was reported. The survey was covered the area of C-Target on the Field of Dreams |
| 2019: J. Renaud, R. Dillman | Prospecting, Geological Mapping, Microprobe studies | 20000019159 | Outcrops and boulders found south of the B-Target were investigated. No mineralization found. Work was focused in mostly in cell 32D05J274. |
| 2019: J. Renaud, R. Dillman | Prospecting, Geological Mapping, | 20000019158 | Prospecting and geological mapping were conducted in the vicinity to the magnetic feature dubbed the A-Target situated cell 32D05J173. No outcrops were found. |
| 2020-2021: J. Renaud, R. Dillman | Prospecting, Geological mapping | 20000020246 | Prospecting and geological mapping were conducted in cells 32D05J235, 32D05J236, 32D05J256, 32D05J276. Outcrop exposure was limited. Samples were taken from a small quartz vein and carbonate altered float found close to the boundary of cells 32D05I256, 32D05I276. No significant assays were obtained upon assay. |
| 1986: Lac Minerals Ltd. | Ground Magnetometer survey | 32D05NE0051 | Survey cover part of B-Target and areas to the west covering cells 32D05J253, 32D05J254, 32D05J273 and 32D05J274. Survey outline B-Target as a SW tear-shaped feature traced 650 m. |
| 1986: Lac Minerals Ltd. | Ground Magnetometer survey | 32D05NE0048 | Survey cover part of B-Target and areas to the west covering cells 32D05J251 to 32D05J254 and 32D05J271 to 32D05J274. |
| 1993: Sudbury Contact Mines Ltd. | Ground Magnetometer and I.P survey | 32D12SW9750 | Magnetic survey outline B-Target as a NE trend feature extending approximately 600 m and 150 m wide. Several N-S striking I.P. anomalies were traced across the magnetic feature. Survey covered parts of cells 32D05J253, 32D05J254, 32D05J273 and 32D05J274. |

| Year & Company | Survey Type | File Number | Results |
|---|---|---|---|
| 2008- 2012: Skead Holdings Ltd. | Ground Magnetometer, VLF-EM and Max-Min HLEM | 20000007117 20000006449 20000003937 | Survey cover part of B-Target and areas to the west covering cells 32D05J253, 32D05J254, 32D05J273 and 32D05J274. Grid lines are near parallel to orientation of B-Target. |
| 2019: R. Dillman, J. Renaud | Ground Magnetometer and VLF-EM surveys | 20000017886 | Magnetometer outlined B-Target as NE trending feature traced 650 m and 300 m wide. The VLF survey traced a conductor for 200 m NE and nearly coincident with strongest section of magnetic feature. Several additional conductors 50 to 100 m in length were detected along the south margin of the magnetic feature. Survey was situated in cells 32D05J254 and 32D05J274. |
| 2019: R. Dillman, J. Renaud | Ground Magnetometer and VLF-EM surveys | 20000017888 | Magnetometer outlined A-Target as N trending feature traced 450 m and 50-150 m wide. The VLF survey detected a conductor on the NE flank of the magnetic anomaly. The surveys are situated in cells 32D05J273 and 32D05J293. |
| 2004: Tiger Gold Exploration Corporation. | Ground Magnetometer and VLF-EM surveys | 32D05NE2041 | Survey covered parts of cells 32D05J235 and 32D05J236. A number of E-W trend magnetic highs and lows were outlined. These were crossed by several N-trending VLF conductors. |
| 2002 – 2012: Tiger Gold Exploration Corporation. | Ground Magnetometer and VLF-EM surveys | 32D05NE2027 20000001114 32D05NE2044 | Tiger Gold completed numerous small magnetometer and VLF surveys in the NW section of the FOD property. |
| 1996-1997: Queenston Mining Inc. | Ground Magnetometer survey | 32D05NE0072 | Survey delineated several NE trending magnetic features which cross most of the survey area. Cells 32D05J173, 32D05J157, 32D05J233, and 32D05J237 mark the approximate corners of the area surveyed. |
| 2023: Goldenfire Minerals Inc. | Ground Magnetometer and VLF-EM surveys | 20000021456 | Survey was preformed in cells 32D05J171, 32D05J172, 32D05J191, and 32D05J192. Survey delineated a NE trending magnetic feature dubbed D-Target crossing the area surveyed and is possibly western extension of one of the magnetic anomalies outlined in the 1996-1997 survey by Queenston Mining Inc. |
| 2021: Arjadee Prospecting | Ground Magnetometer | 20000019762 | Survey defined a NE oval shaped magnetic feature dubbed C-Target roughly 250 x 125 m in size. Anomaly is situated on the boundary between cells 32D05J179 and 32D05J180. |
| 2023: Goldenfire Minerals Inc. | Ground Magnetometer and VLF-EM surveys | | C-Target was resurveyed with magnetometer and VLF. Several weak to moderate conductors ranging 25 to 100 m in length and coincident with the magnetic anomaly were outlined. |
| 1992: West Viking Explorations Ltd. | Ground Magnetometer and Max-Min surveys | 32D05NE0065 | Survey was preformed E and SE of McDiarmid Lake in cells 32D05I172 to 32D05I174, 32D05I193, 32D05I194, 32D05I2123 and 32D05I214. Magnetic survey outlined a series of patchy highs and lows defining a broad closure corresponding in part to the altered area hosting the showings and trenches. No definitive bedrock anomalies were outlined by the Max-Min survey. |

| Year & Company | Survey Type | File Number | Results |
|---|---|---|---|
| 1964: Copconda Mines Ltd. | Ground Magnetometer and EM Horizontal Loop surveys | 32D05NE0083 | Survey was preformed E and SE of McDiarmid Lake in cells 32D05I171 to 32D05I213 and extends E to the Quebec border. The magnetometer outlined a number of mag highs related to syenite and mafic intrusions. The EM survey detected weak conductors possibly related to bedrock conductors. |
| 1971: Kennco Explorations (Canada) Ltd | TURAM EM survey | 32D05NE0021 | The survey was mostly centered over McDiarmid Lake covering the area between cells 32D05I109 to 32D05I112 and southward to the township boundary. No definitive conductors were outlined. |
| 2003: Inmet Mining Corp. | LPTEM FIXED-LOOP PROFILING survey | 32D05NE2033 | The survey covered areas in a NE direction from McDiarmid Lake in cells 32D05I073 to 32D05I113 to the Quebec border and further into Quebec. A weak to moderate conductor was traced from the lake in a NE direction to the Quebec border. |
| 1993: Noranda Exploration Co. Inc.. | I.P Survey, geological mapping | 32D05NE9349 | The survey covered areas in a E direction from McDiarmid Lake in cells 32D05I073 to 32D05I103 to the Quebec border. Outcrops in the area consist of basalt and massive rhyolite. Two single station I.P. anomalies were detected on the two outside line of three N-S lines surveyed close to the Quebec border. |
| 1985: St Joe Canada Inc. | Magnetometer Survey | 32D05NE0079 | The survey covered areas in a E direction from McDiarmid Lake in cells 32D05I053 to 32D05I103 to the Quebec border. The survey outlined NE trending discontinuous mag highs and lows corresponding to the general trend of geology. |

## Regional and Local Geology of the Field of Dreams Property (FOD)

The Field of Dreams Property is in the Harker-Holloway section of the Abitibi Greenstone Belt. This region is renowned for its rich mineral deposits and complex geological history, making it an area of intense interest for geologists and mining companies alike. The Abitibi Greenstone Belt itself is one of the most extensive greenstone belts in the world, known for its abundant mineral resources, including gold, nickel, and copper.

The property is predominantly underlain by Archean units of the Lower and Upper Blake River assemblage, dated between 2704 and 2696 Ma (million years ago). This assemblage is characterized by a variety of northeast trending, steeply to vertically dipping volcanic and plutonic rock units consisting mainly of massive to pillowed, vesicular, and brecciated flows of mafic metavolcanic rocks. These volcanic rocks were formed from ancient lava flows and have undergone significant metamorphism over millions of years. Intruding these metavolcanic rocks are gabbroic sills and plutons, which are large, coarse-grained igneous bodies that crystallized from molten magma. Additionally, the region is intersected by north to northwest striking diabase dikes, which are younger, fine-grained igneous intrusions.

The FOD Property is situated approximately 7 kilometers south of the Destor Porcupine Fault Zone, a major regional structure known for its association with significant gold mineralization. This fault zone has historically been a focal point for gold exploration and mining activities in the region. The structural geology of the FOD Property is marked by several northeast trending faults and shear zones such as those found northeast of McDiarmid Lake. These structures are essential pathways for fluid flow and mineralization, often hosting valuable mineral deposits in the area. The northeast trending shear zones, located just west and north of the property, are particularly noteworthy for hosting gold mineralization, indicating their potential economic importance. In addition to the older northeast trending faults and shear zones, the property is also intersected by younger north trending faults. These faults have displaced the older structures and rock units, adding complexity to the geological framework of the region.

The FOD Property hosts a variety of mineral occurrences, reflecting its diverse geological history and favorable structural setting. Drill indicated nickel-copper-palladium-cobalt-gold mineralization has been historically found in a gabbro pluton located in the southern section of the property. This mineralization is of significant interest due to the economic value of these metals, particularly palladium, which is used extensively in automotive catalytic converters and electronics. In the McDiarmid Lake section of the property, copper-gold mineralization occurs in mafic metavolcanic rocks situated proximal to a syenite intrusion on the east side of the lake and copper bearing sulphides occur in mafic metavolcanic rocks outcropping on the west shore of the lake. Drill indicated zinc-silver- gold mineralization occurs in a rhyolite unit striking northeast from the north section of the lake.  As mentioned earlier, the northeast trending shear zones west of the property are known to host gold mineralization. The proximity of these shear zones to the FOD Property suggests potential for similar mineralization within the property boundaries, warranting further exploration and investigation.

Respectfully submitted,

Robert Dillman P.Geo.

January 24, 2025

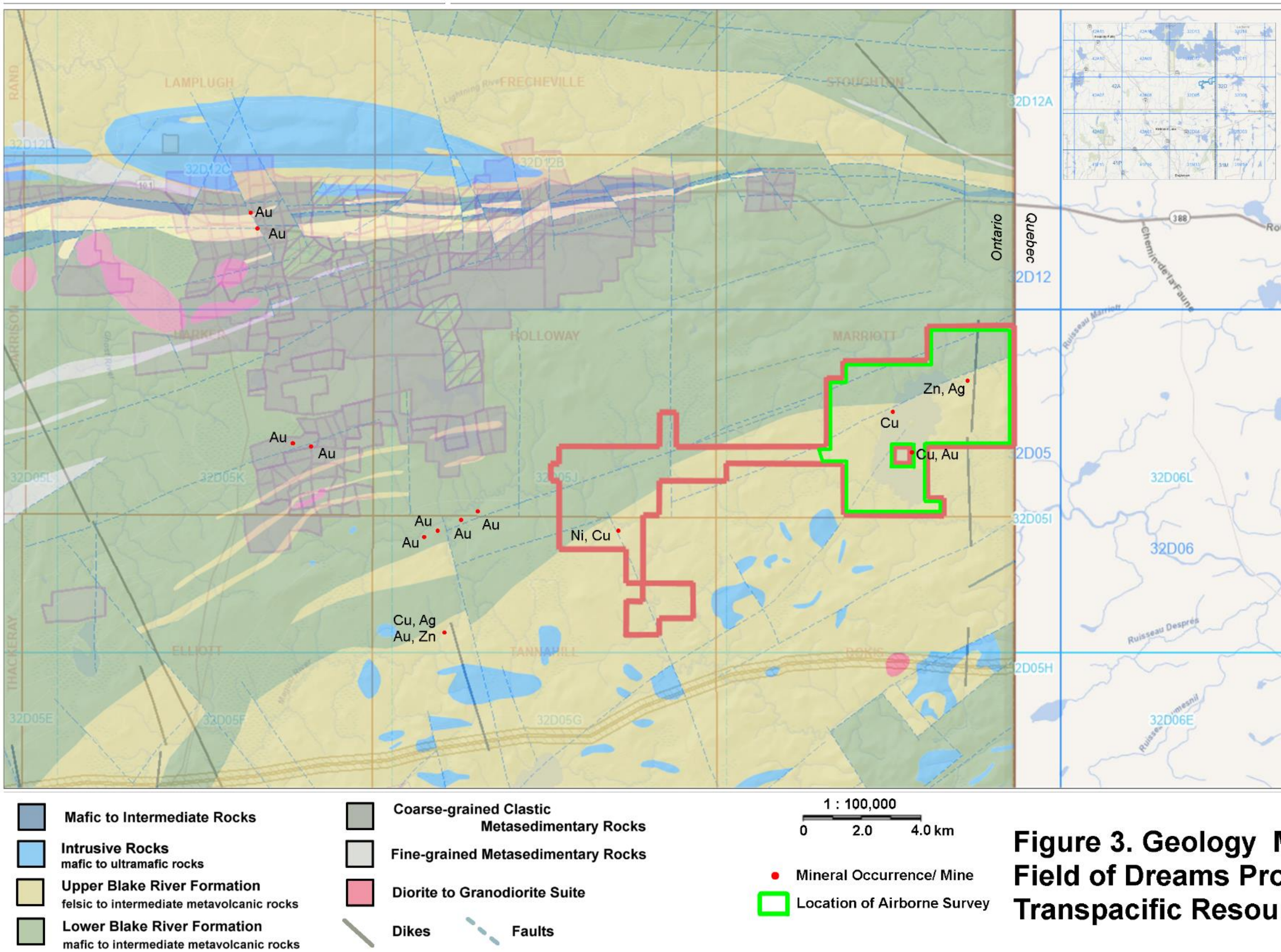
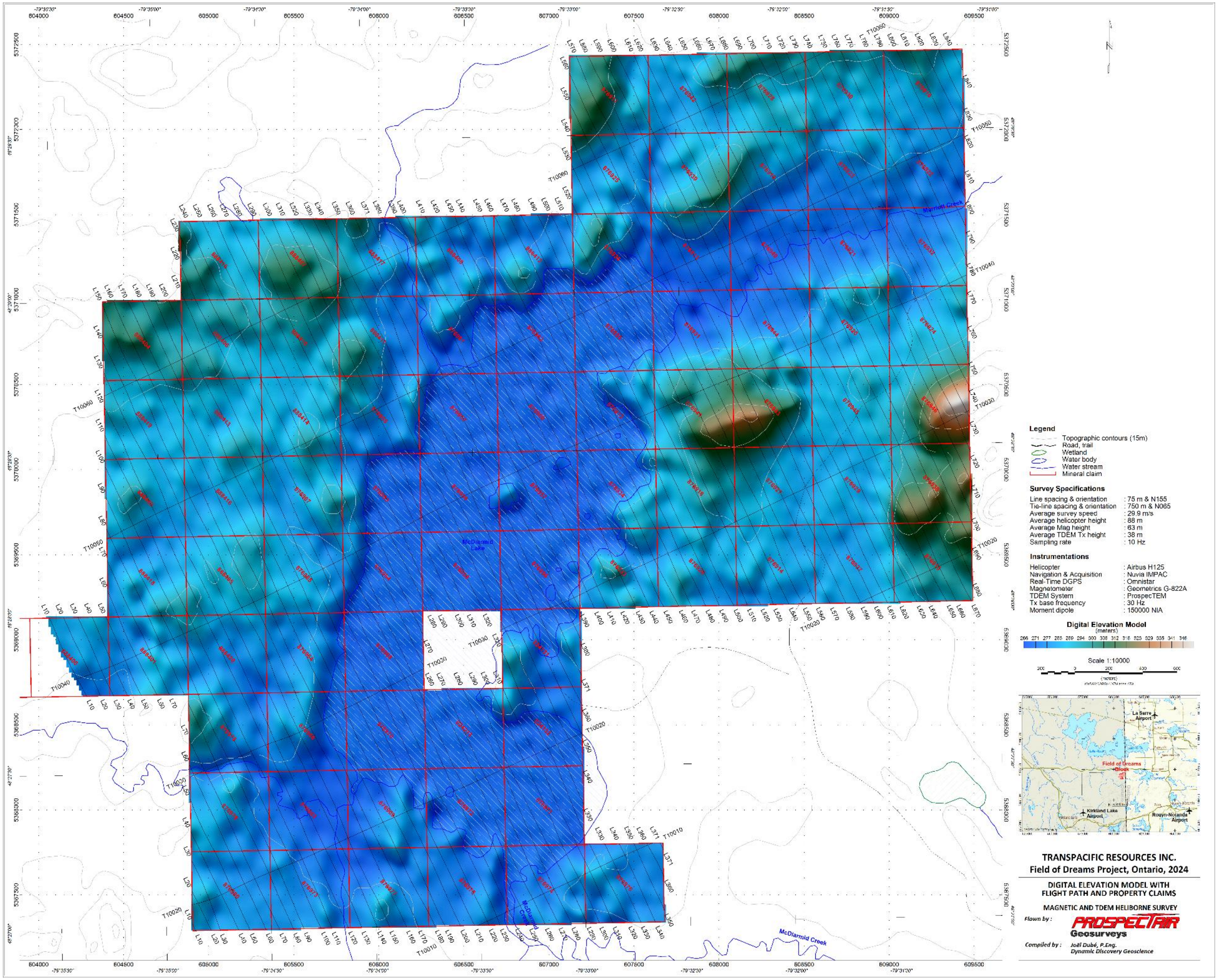
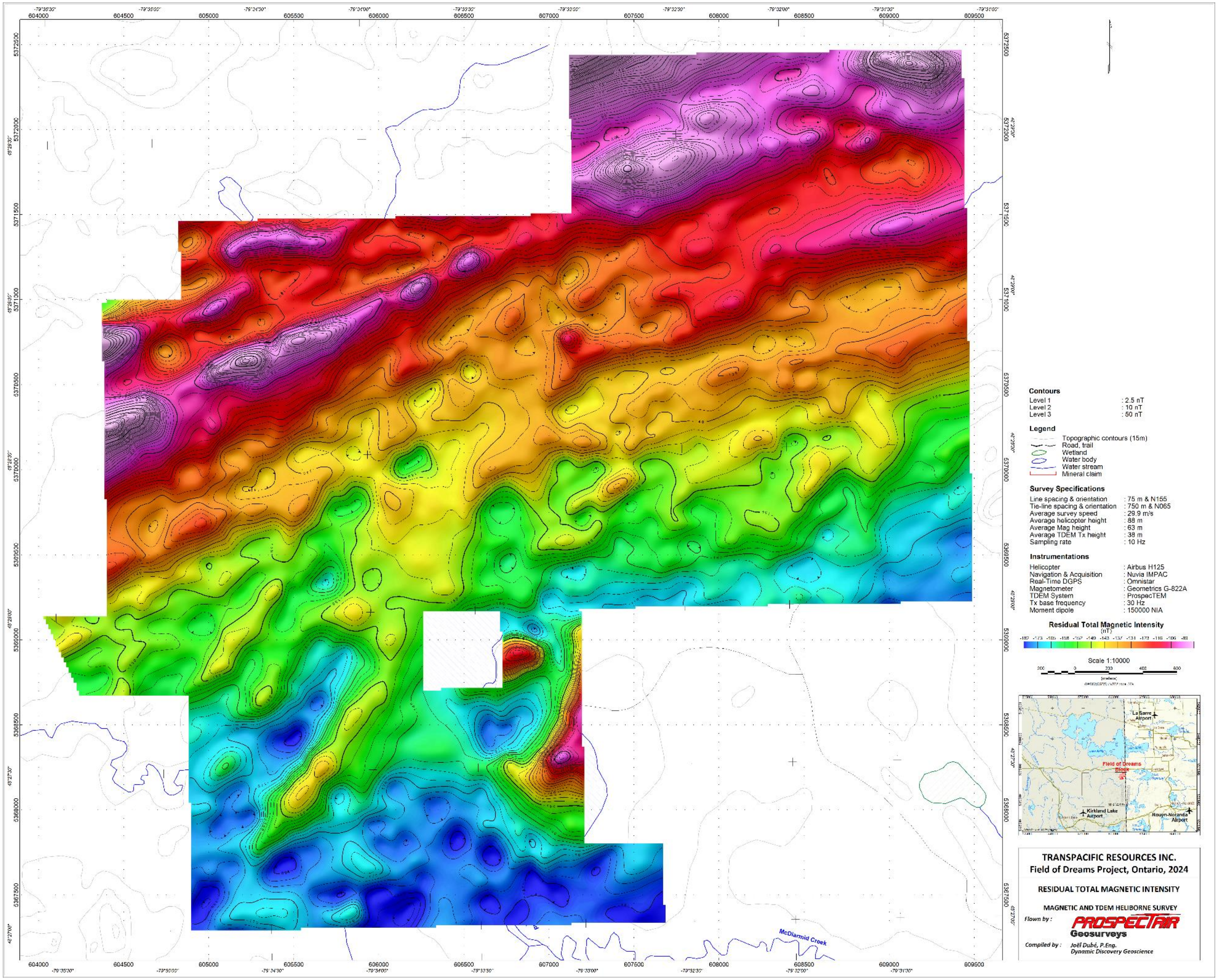
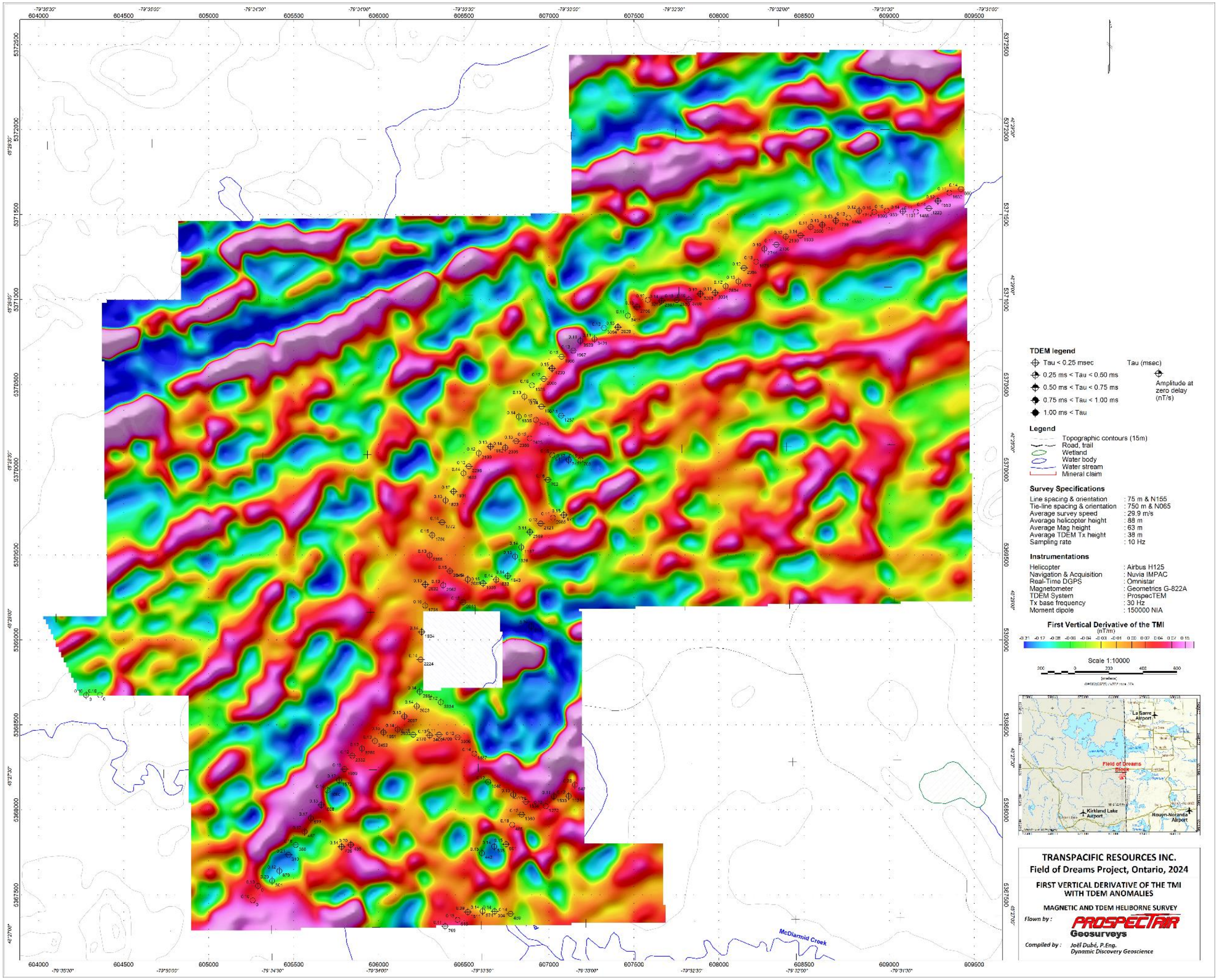



**Figure 3. Geology Map**
**Field of Dreams Property**
**Transpacific Resources Inc.**


Marriott Creek
McDiarmid Lake
McDiarmid Creek
Legend
Topographic contours (15m)
Road, trail
Wetland
Water body
Water stream
Mineral claim
Survey Specifications
Line spacing & orientation : 75 m & N155
Tie-line spacing & orientation : 750 m & N065
Average survey speed : 29.9 m/s
Average helicopter height : 88 m
Average Mag height : 63 m
Average TDEM Tx height : 38 m
Sampling rate : 10 Hz
Instrumentations
Helicopter : Airbus H125
Navigation & Acquisition : Nuvia IMPAC
Real-Time DGPS : Omnistar
Magnetometer : Geometrics G-822A
TDEM System : ProspecTEM
Tx base frequency : 30 Hz
Moment dipole : 150000 NIA
Digital Elevation Model
(meters)
266 271 277 283 289 294 300 306 312 318 323 329 335 341 346
Scale 1:10000
200 0 200 400 600
(meters)
La Sarre Airport
Field of Dreams Block
Kirkland Lake Airport
Rouyn-Noranda Airport
TRANSPACIFIC RESOURCES INC.
Field of Dreams Project, Ontario, 2024
DIGITAL ELEVATION MODEL WITH
FLIGHT PATH AND PROPERTY CLAIMS
MAGNETIC AND TDEM HELIBORNE SURVEY
Flown by :
PROSPECTAIR Geosurveys
Compiled by :
Joël Dubé, P.Eng.
Dynamic Discovery Geoscience


Contours
Level 1 : 2.5 nT
Level 2 : 10 nT
Level 3 : 50 nT
Legend
Topographic contours (15m)
Road, trail
Wetland
Water body
Water stream
Mineral claim
Survey Specifications
Line spacing & orientation : 75 m & N155
Tie-line spacing & orientation : 750 m & N065
Average survey speed : 29.9 m/s
Average helicopter height : 88 m
Average Mag height : 63 m
Average TDEM Tx height : 38 m
Sampling rate : 10 Hz
Instrumentations
Helicopter : Airbus H125
Navigation & Acquisition : Nuvia IMPAC
Real-Time DGPS : Omnistar
Magnetometer : Geometrics G-822A
TDEM System : ProspecTEM
Tx base frequency : 30 Hz
Moment dipole : 150000 NIA
Residual Total Magnetic Intensity
(nT)
Scale 1:10000
200 0 200 400 600
McDiarmid Creek
La Sarre Airport
Field of Dreams
Kirkland Lake Airport
Rouyn-Noranda Airport
TRANSPACIFIC RESOURCES INC.
Field of Dreams Project, Ontario, 2024
RESIDUAL TOTAL MAGNETIC INTENSITY
MAGNETIC AND TDEM HELIBORNE SURVEY
Flown by :
PROSPECTAIR Geosurveys
Compiled by :
Joël Dubé, P.Eng.
Dynamic Discovery Geoscience



TDEM legend
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0.25 ms < Tau < 0.50 ms
0.50 ms < Tau < 0.75 ms
0.75 ms < Tau < 1.00 ms
1.00 ms < Tau
Tau (msec)
Amplitude at zero delay (nT/s)
Legend
Topographic contours (15m)
Road, trail
Wetland
Water body
Water stream
Mineral claim
Survey Specifications
Line spacing & orientation : 75 m & N155
Tie-line spacing & orientation : 750 m & N065
Average survey speed : 29.9 m/s
Average helicopter height : 88 m
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Sampling rate : 10 Hz
Instrumentations
Helicopter : Airbus H125
Navigation & Acquisition : Nuvia IMPAC
Real-Time DGPS : Omnistar
Magnetometer : Geometrics G-822A
TDEM System : ProspecTEM
Tx base frequency : 30 Hz
Moment dipole : 150000 NIA
First Vertical Derivative of the TMI
(nT/m)
Scale 1:10000
La Sarre Airport
Field of Dreams Project
Kirkland Lake Airport
Rouyn-Noranda Airport
McDiarmid Creek
TRANSPACIFIC RESOURCES INC.
Field of Dreams Project, Ontario, 2024
FIRST VERTICAL DERIVATIVE OF THE TMI WITH TDEM ANOMALIES
MAGNETIC AND TDEM HELIBORNE SURVEY
Flown by :
PROSPECTAIR Geosurveys
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Dynamic Discovery Geoscience